



RESIDENTIAL SYSTEM SOLUTIONS



VENTZONE® SYSTEMS

HEAT AND ENERGY RECOVERY VENTILATORS






TECHNICAL DOCUMENTATION

VENTZONE® IAQ WITH HRV OR ERV






HOW IT WORKS

In the heating season, Heat Recovery Ventilators (HRV) and Energy Recovery Ventilators (ERV) draw in fresh air from outside. This air is distributed throughout the home by a dedicated-duct system or through the forced-air heating / air conditioning system. At the same time, vents located in moisture- and pollutant-producing rooms (e.g., kitchens, bathrooms, laundry rooms) exhaust an equal amount of stale, humid air to the outside. Sometimes air is drawn directly from the return air of a forced-air heating/air conditioning system. As the two airstreams pass each other in the unit's core, the fresh air is tempered with heat recovered from the exhaust air. An ERV will also transfer moisture to the fresh air if this air is drier than the exhaust air, improving comfort in overly dry homes. In the cooling season, the reverse occurs. Fresh outdoor air is cooled by the air-conditioned exhaust air. If the outgoing air is drier than the fresh air, the ERV will transfer moisture to the outgoing air. This process reduces the humidity load on the air conditioning system, which would otherwise result in the continuous introduction of humid summer air to the home.

VentZone® Zoned IAQ Kits with Heat Recovery

Number of Bathrooms	Airflow @ 0.2 in. w.g.	Ventilator	6" ZRT-2-6-24R (24V) 10/20/30 CFM	4" ZRT-2-4-24R (24V) 10/20/30 CFM	4" ZRT-1-4-24R (24V)	20/40/60 Push Button Timer
						
2	140 CFM	H150-TQG or H150-TRG	--	2	--	2
2	140 CFM	H150-TQG or H150-TRG	--	2	--	2
2.5	140 CFM	H150-TQG or H150-TRG	--	2	1	3
2.5	220 CFM	H190-TQG or H190-TRG	1	1	1	2
3	220 CFM	H190-TQG or H190-TRG	1	2	--	3
3.5	220 CFM	H190-TQG or H190-TRG	1	2	1	4
4.5	220 CFM	H190-TQG or H190-TRG	1	3	1	5
5	220 CFM	H190-TQG or H190-TRG	1	4	--	5

VentZone® Zoned IAQ Kits with Energy Recovery

Number of Bathrooms	Airflow @ 0.2 in. w.g.	Ventilator	6" ZRT-2-6-24R (24V) 10/20/30 CFM	4" ZRT-2-4-24R (24V) 10/20/30 CFM	4" ZRT-1-4-24R (24V)	20/40/60 Push Button Timer
						
2	125 CFM	E150-TRG	--	2	--	2
2.5	125 CFM	E150-TRG	--	2	1	3
2.5	191 CFM	E190-TRG	1	1	1	2
3	191 CFM	E190-TRG	1	2	--	3
3.5	191 CFM	E190-TRG	1	2	1	4
4.5	191 CFM	E190-TRG	1	3	1	5
5	191 CFM	E190-TRG	1	4	--	5



ZRT-R

ZONE REGISTER TERMINALS

AIRFLOW & ZONE CONTROL

**Made in
USA**

**WARRANTY
3 YEARS**

**Patent
pending**



Product Description

Aldes patented Zone Register Terminal (ZRT-R)* are designed to introduce flexibility and demand control to central ventilation systems. The multi-zone ZRT® regulates ventilation without need for individual fans. Each ZRT-R is a combination grille, register box, control damper, and optional flow regulator(s). This unique combination provides up to four different control schemes without the need for expensive pneumatic, electronic, or DDC control systems. To ensure the proper calibration of the damper assembly, do not exceed 1.0 in. w.g. (250 Pa) of differential pressure across the damper door.

When used in central systems, the ZRT-1 model provides on-off control for on-demand ventilation. This allows fan downsizing and promotes energy savings by minimizing necessary fan horsepower and ventilation-induced heating and cooling loads on the building. The optional Constant Airflow Regulator (CAR3) can be installed in the ZRT-1's extended duct collar to place a maximum flow limit on each terminal when activated. The automatic operation of the CAR3 will provide precise balancing to each terminal, compensating for intermittent use of other ZRTs around the building, as well as factors like stack-effect.

The ZRT-2 model is used for combination low-flow continuous indoor air quality ventilation and on-demand high-flow spot ventilation using the same central fan system. This is achieved by integrating a minimum Constant Airflow Regulator (CAR3) directly into the damper assembly. When the ZRT-2 is powered on, the control damper powers open, bypassing the low-flow CAR3 to allow the boost ventilation rate set by the maximum flow CAR3 (when equipped).

Construction

- Gasketed damper blade ensures a tight seal preventing unwanted air leakage and noise in closed position.
- Constructed of 24-gauge galvanized steel housing for durability.
- 24 VAC, 120 VAC, or 230 VAC actuator motor with spring return damper assembly.
- Painted white extruded aluminum grille; blades fixed at 38°.
- Optional CAR3 constant airflow regulator.

Warranty

The entire unit is guaranteed for 3 years, from date of shipment, against all manufacturing defects, provided the material has been installed & operated per manufacturer's instructions & under normal conditions. Warranty is limited to the repair or replacement of the material upon its return freight paid to our factory. This warranty is not transferable & limited to the original end user.

Maintenance

The ZRT-R needs no maintenance when used in normal conditions. If the intended application includes air heavily loaded with grease or dust, access to all components of the assembly is through the removable grille for cleaning.

How to Specify Aldes: ZRT-R

Step 1: Reference the model code below and performance details within this specifications sheet to select the appropriate ZRT-R.

Step 2: Determine the **SERIES** required for your specific project.

NOTE: The ZRT is available with or without a minimum flow option for application requiring low volume continuous airflows. The minimum flow control equips a CAR3 to provide a balanced minimum airflow rate. Factory calibration of the minimum flow CAR3 is available on request.

Step 3: Select the required **SIZE**.

Step 4: Select the required motor based on available **POWER**.

Step 5: If equipped, select the **MAXIMUM FLOW CONTROL**.

Model Code Example

ZRT-R-2-4-24

PARENT MODEL

Zone Register Terminal

APPLICATION

R: Exhaust

SERIES

- 1: No Minimum Flow Control
- 2: With Minimum Flow Control

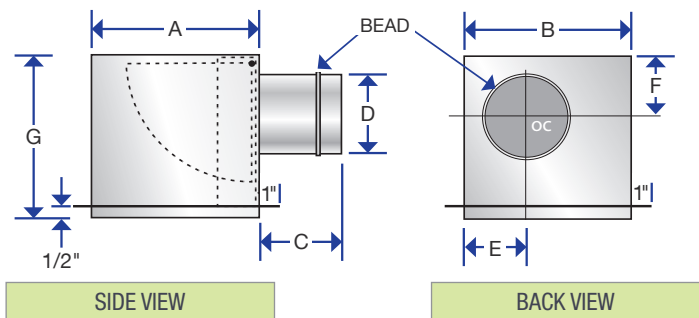
SIZE

- 4: 8" x 8" Grille w/ 4" collar
- 6: 10" x 10" Grille w/ 6" collar

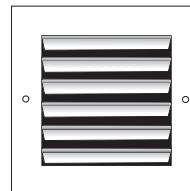
POWER

- 24: 24 V/60Hz
- 120: 120 V/60Hz
- 230: 230 V/50Hz

ZRT-R Dimensions



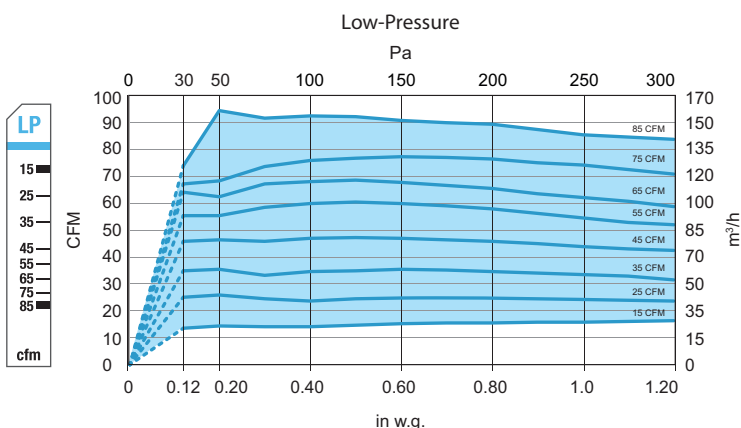
Size	A	B	C	D	E	F	G
4" (100 mm)	8" (203 mm)	8" (203 mm)	4-1/2" (114 mm)	3-7/8" (98 mm)	2-1/2" (64 mm)	3-1/2" (89 mm)	7" (177 mm)
6" (150 mm)	10" (254 mm)	10" (254 mm)	5-1/2" (140 mm)	5-7/8" (149 mm)	3-1/2" (89 mm)	4-1/2" (114 mm)	8-1/2" (216 mm)



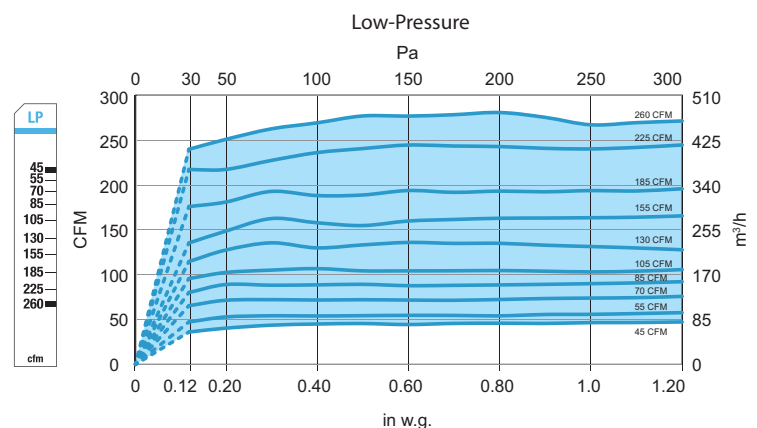
EXHAUST GRILLE

*Optional Finishes: anodized or black.
Contact Aldes representatives for additional colors.*

ZRT with CAR3 4" DIAMETER (100 mm)



ZRT with CAR3 6" DIAMETER (150 mm)



Airflow measurements taken at 68°F (20°C) at 1 atmosphere pressure.



E150-TRG

ENERGY RECOVERY VENTILATOR

125 CFM at 2.0 in w.g. (ESP)

WARRANTY
5 YEARS

UNIT

LIFETIME
WARRANTY

CORE

MADE IN
CANADA



CANADA



C22.2
no113
UL 1812

Product Description

Compact size, large performance – the E150-TRG energy recovery ventilator produces approximately **125 CFM** at 0.20 in.w.g (ESP) and recovers sensible and latent heat through its high-latent-transfer membrane core. The E150-TRG has been thoughtfully engineered for simple installation in apartments, condos, and small houses. The removable collars are top-mounted, which makes the unit both narrow and shallow enough to fit inside standard closets and other tight spaces.

The E150-TRG with FLEXControl, airflow circuits can be calibrated electronically, eliminating the need for resistance-inducing balancing dampers and improving overall efficiency.

KEY FEATURES

Electronically and independently adjustable supply and exhaust blowers (FLEXControl)

Gauge ports on the door for fast and reliable airflow readings

Durable HLT core with exceptional moisture transfer for more comfort and no drain required

Non-dust-loading backward-inclined impellers on totally enclosed motors

Twist-in collars for easy flex-duct attachment

Easy access to core and filters for cleaning

Multiple low-voltage controller options

Recirculation defrost collar snaps into pre-punched area of cabinet for ducting flexibility



Recovery Core

Material: High-latent-transfer membrane

Casing

Material: Pre-painted 24-gauge galvanized steel

Duct Connections: Ø 5" (Ø 127 mm)

Insulation: Molded EPS

Width: 23-1/8" (587 mm)

Height: 16-3/4" (425 mm)

Depth: 12-3/8" (314 mm)

Weight: 32 lbs (15 kg); Shipping Weight: 40 lbs (18 kg)

Supply Damper: Motorized



Mounting

Suspended by chains with vibration-isolating springs
Wall-mounting accessory available (P/N 608575)



Electrical requirement

120 VAC, 60Hz, 1.3A, 156W

Cord Set: 48" (1219 mm) with ground



Frost control

Automatic timed recirculation, fifth port

Cycles controlled by a temperature sensor when the outdoor temperature drops below 14°F (-10°C)



Filters

Type : Two MERV6 filters (P/N 612409)

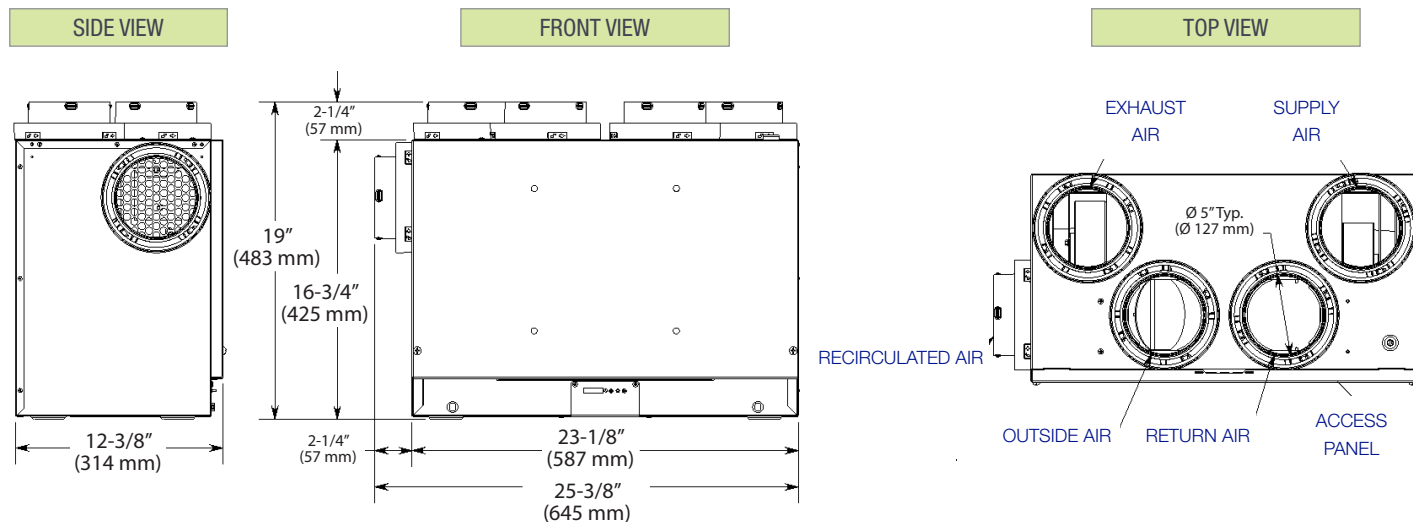
Option : Two MERV13 filters (P/N 612410)



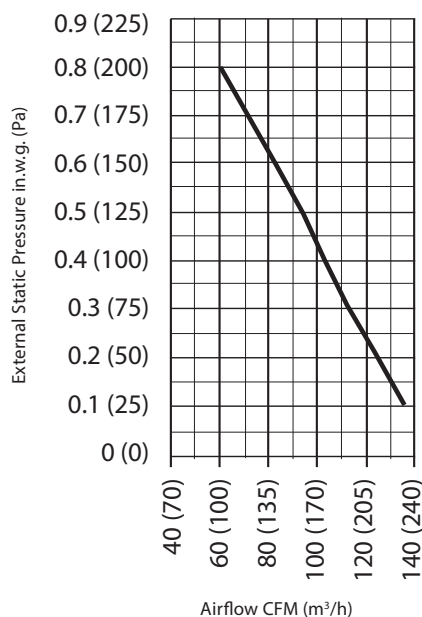
Blowers

Motorized impellers (backward-inclined)

Dimensions & Performance



E150-TRG Ventilation Performance



Supply Temperature		Net Airflow		Power Consumed (W)	Sensible Recovery Efficiency	Adjusted Sensible Recovery Efficiency	Latent Recovery/ Moisture Transfer	Total Recovery Efficiency
°F	°C	CFM	L/s					
Heating								
32	0	51	24	42	68%	73%	57%	--
32	0	62	29	62	66%	72%	55%	--
32	0	103	49	98	58%	64%	45%	--
-13	-25	50	24	64	61%	64%	55%	--
Cooling								
95	35	49	23	42	--	--	45%	52%



H150-TQG

HEAT RECOVERY VENTILATOR

140 CFM at 2.0 in w.g. (ESP)



Product Description

The H150-TQG has been thoughtfully engineered for simple installation in apartments, condos, and small houses. The removable collars are top-mounted, which makes the unit both narrow and shallow enough to fit inside standard closets and other tight spaces.



Recovery Core

Material: Polypropylene

Casing

Material: Pre-painted 24-gauge galvanized steel
Drain Connection: Ø 3/8" (Ø 10 mm)
Duct Connections: Ø 5" (Ø 127 mm)
Insulation: Molded EPS
Width: 23-1/8" (587 mm)
Height: 16-3/4" (425 mm)
Depth: 12-3/8" (314 mm)
Weight: 32 lbs (15 kg); Shipping Weight: 40 lbs (18 kg)
Supply Damper: Motorized



Mounting

Suspended by chains with vibration-isolating springs
Wall-mounting accessory available (P/N 608575)



Electrical requirement

120 VAC, 60Hz, 1.3A, 156W
Cord Set: 48" (1219 mm) with ground



Frost control

Automatic timed recirculation, four port
Cycles controlled by a temperature sensor when the outdoor temperature drops below 23°F (-5°C)



Filters

Type : Two MERV6 filters (P/N 612409)
Option : Two MERV13 filters (P/N 612410)



Blowers

Motorized impellers (backward-inclined)

KEY FEATURES

Electronically and independently adjustable supply and exhaust blowers (FLEXControl)

Gauge ports on the door for fast and reliable airflow readings

Non-dust-loading backward-inclined impellers on totally enclosed motors

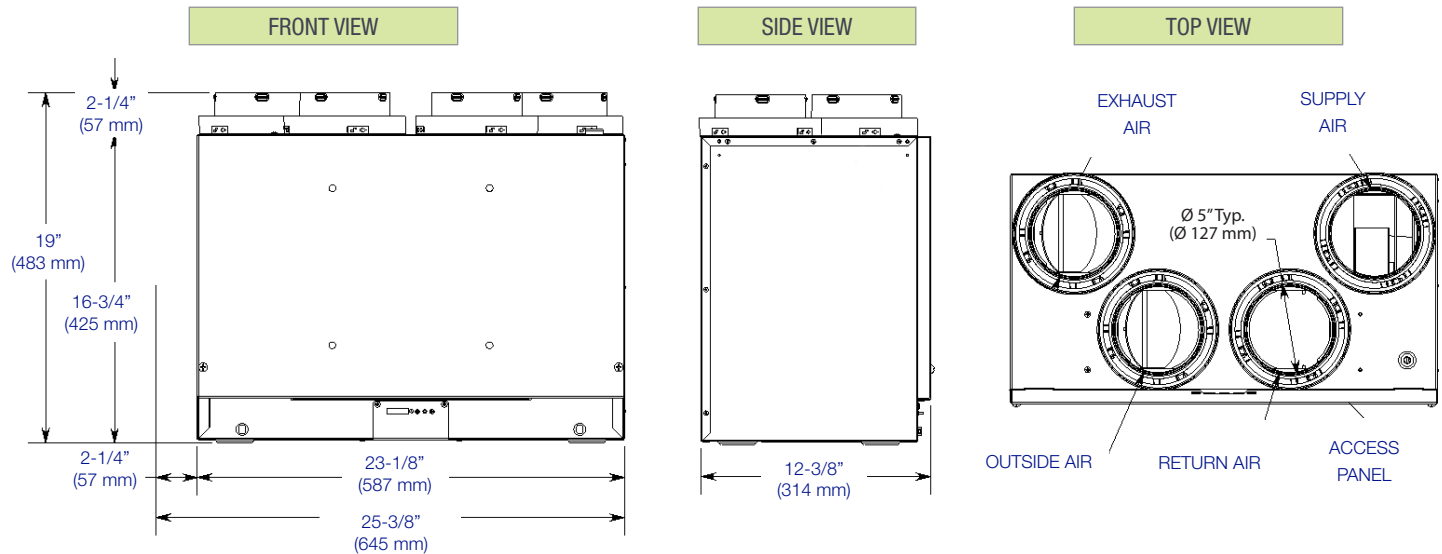
Twist-in collars for easy flex-duct attachment

Easy access to core and filters for cleaning

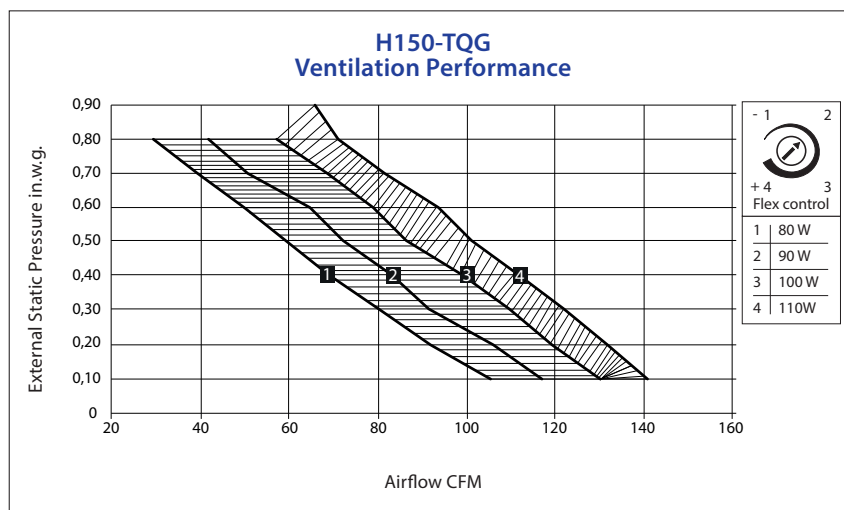
Extremely durable polypropylene core

Recirculation defrost to maintain a neutral pressure in the home, and using only the four duct connections. No fifth duct connection required

Dimensions & Performance



Supply Temperature		Net Airflow		Power Consumed (W)	Sensible Recovery Efficiency	Adjusted Sensible Recovery Efficiency
°F	°C	CFM	L/s			
32	0	53	25	44	67%	73%
32	0	66	31	48	65%	70%
32	0	100	47	88	59%	65%
-13	-25	66	31	72	60%	63%





H150-TRG

HEAT RECOVERY VENTILATOR

142 CFM at 2.0 in w.g. (ESP)



Product Description

Compact size, large performance – the H150-TRG heat recovery ventilator produces approximately **142 CFM** at 0.20 in.w.g (ESP) and recovers heat through its high-efficiency polypropylene core. The H150-TRG has been thoughtfully engineered for simple installation in apartments, condos, and small houses. The removable collars are top-mounted, which makes the unit both narrow and shallow enough to fit inside standard closets and other tight spaces.

The H150-TRG with FLEXControl, airflow circuits can be calibrated electronically, eliminating the need for resistance-inducing balancing dampers and improving overall efficiency.



Recovery Core

Material: Polypropylene

Casing

Material: Pre-painted 24-gauge galvanized steel
Drain Connection: Ø 3/8" (Ø 10 mm)
Duct Connections: Ø 5" (Ø 127 mm)
Insulation: Molded EPS
Width: 23-1/8" (587 mm)
Height: 16-3/4" (425 mm)
Depth: 12-3/8" (314 mm)
Weight: 32 lbs (15 kg); Shipping Weight: 40 lbs (18 kg)
Supply Damper: Motorized



Mounting

Suspended by chains with vibration-isolating springs
Wall-mounting accessory available (P/N 608575)



Electrical requirement

120 VAC, 60Hz, 1.3A, 156W
Cord Set: 48" (1219 mm) with ground



Frost control

Automatic timed recirculation, fifth port
Cycles controlled by a temperature sensor when the outdoor temperature drops below 23°F (-5°C)



Filters

Type : Two MERV6 filters (P/N 612409)
Option : Two MERV13 filters (P/N 612410)



Blowers

Motorized impellers (backward-inclined)

KEY FEATURES

Gauge ports on the door for fast and reliable airflow readings

Snap-out motor decks

Non-dust-loading backward-inclined impellers on totally enclosed motors

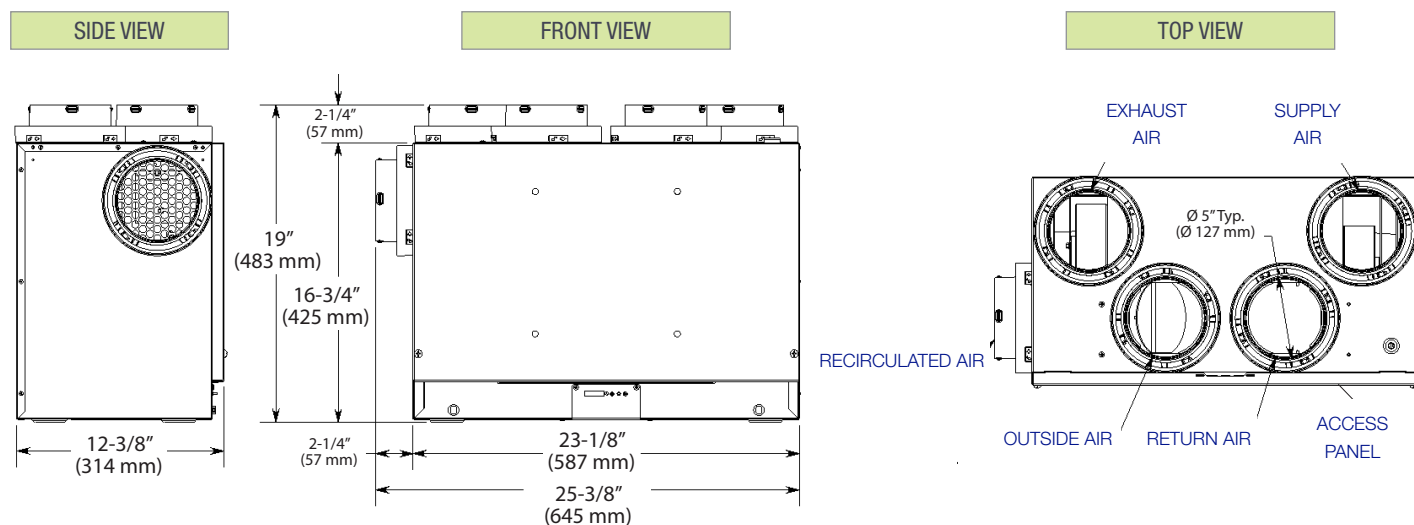
Twist-in collars for easy flex-duct attachment

Easy access to core and filters for cleaning

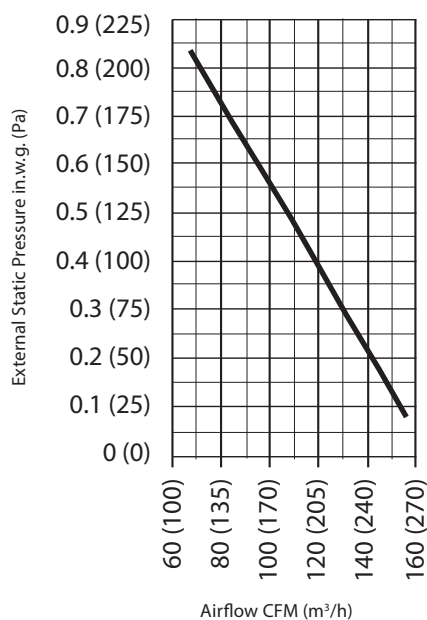
Extremely durable polypropylene core

Recirculation defrost collar snaps into pre-punched area of cabinet for ducting flexibility

Dimensions & Performance



H150-TRG Ventilation Performance



Supply Temperature		Net Airflow		Power Consumed (W)	Sensible Recovery Efficiency	Apparent Sensible Effectiveness
°F	°C	CFM	L/s			
32	0	52	25	44	67%	76%
32	0	64	30	46	65%	72%
32	0	99	47	110	56%	66%
-13	-25	68	32	73	63%	78%



E190-TRG

ENERGY RECOVERY VENTILATOR

165 CFM at 4.0 in w.g. (ESP)



Product Description

Compact size, large performance – the E190-TRG energy recovery ventilator produces approximately **165 CFM** at 0.4 in w.g. (ESP) and recovers sensible and latent heat through its high-latent-transfer core. The E190-TRG has been thoughtfully engineered for simple installation in small businesses and spacious houses.

The E190-TRG with FLEXControl, airflow circuits can be calibrated electronically, eliminating the need for resistance-inducing balancing dampers and improving overall efficiency.

KEY FEATURES

Electronically and independently adjustable supply and exhaust blowers (FLEXControl)

Gauge ports on the door for fast and reliable airflow readings

Removable top-mounted collars

Non-dust-loading backward-inclined impellers on totally enclosed motors

Twist-in collars for easy flex-duct attachment

Easy access to core and filters for cleaning

Multiple low-voltage controller options

Recirculation defrost collar snaps into pre-punched area of cabinet for ducting flexibility



Recovery Core

Material: High-latent-transfer enthalpy

Casing

Material: Pre-painted 24-gauge galvanized steel
Duct Connections: Ø 6" (Ø 152 mm)
Insulation: 1" (25 mm) Fiberglass with FSK
Width: 29 3/16" (745 mm)
Height: 21" (533 mm)
Depth: 15 1/8" (398 mm)
Weight: 46 lbs (23 kg); Shipping Weight: 51 lbs (25 kg)
Supply Damper: Motorized; Exhaust Damper: Gravity



Mounting

Suspended by chains with vibration-isolating springs
Wall-mounting accessory available (P/N 608575)



Electrical requirement

120 VAC, 60 Hz, 1.8 A, 216 W
Cord Set: 48" (1219 mm) with ground



Frost control

Automatic timed recirculation, fifth port
Cycles controlled by a temperature sensor when the outdoor temperature drops below 14°F (-10°C)



Filters

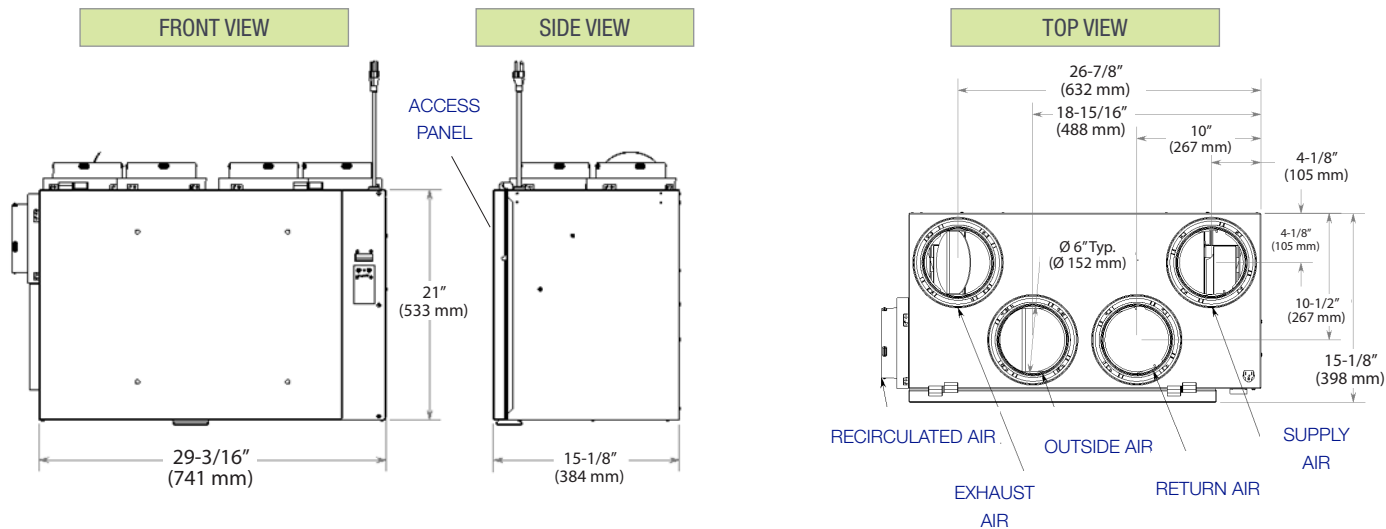
Type : Aluminum (P/N 683959)
Option : Carbon (P/N 683956), MERV 6 (P/N 612408) or high-efficiency MERV 13 (P/N 683957)



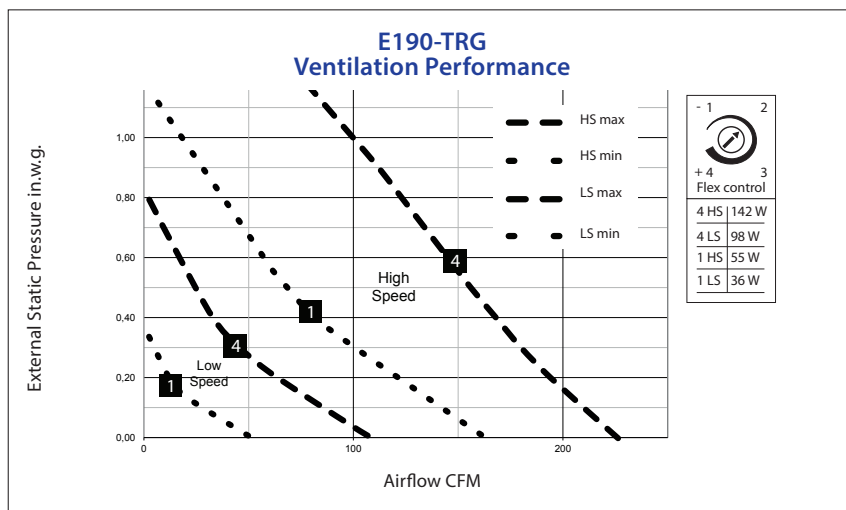
Blowers

Motorized impellers (backward-inclined)

Dimensions & Performance



Supply Temperature		Net Airflow		Power Consumed (W)	Sensible Recovery Efficiency	Apparent Sensible Effectiveness	Latent Recovery/ Moisture Transfer	Total Recovery Efficiency
°F	°C	CFM	L/s					
Heating								
32	0	51	24	52	76%	84%	69%	--
32	0	81	38	62	72%	78%	66%	--
32	0	119	56	106	67%	67%	60%	--
-13	-25	74	35	89	60%	63%	63%	--
Cooling								
95	35	81	38	62	--	--	0.55	56%





H190-TQG

HEAT RECOVERY VENTILATOR

198 CFM at 4.0 in w.g. (ESP)



UNIT



CORE



CANADA



C22.2
no113
UL 1812

Product Description

Compact size, large performance. The H190-TQG heat recovery ventilator exchanges up to **198 CFM** of fresh air at 0.4 in.w.g. (ESP) and recovers heat through its high-efficiency polypropylene core. The H190-TQG has been thoughtfully engineered for simple installation in almost any size of house.



Recovery Core

Material: Polypropylene

Casing

Material: Pre-painted 24-gauge galvanized steel
Drain Connection: Ø 3/8" (Ø 10 mm)
Duct Connections: Ø 6" (Ø 152 mm)
Insulation: Molded EPS
Width: 29-3/16" (741 mm)
Height: 21" (533 mm)
Depth: 15-1/8" (384 mm)
Weight: 46 lbs (21 kg); Shipping Weight: 51 lbs (23 kg)
Motorized Exhaust Damper: Gravity



Mounting

Suspended by chains with vibration-isolating springs
Wall-mounting accessory available (P/N 608575)



Electrical requirement

120 VAC, 60 Hz, 1.95 A, 155 W
Cord Set: 48" (1219 mm) with ground



Frost control

Automatic timed recirculation. Cycles controlled by a temperature sensor when outdoor temperature drops below 23°F (-5°C)



Filters

Type : Aluminum (P/N 683959)
Option : Carbon (P/N 683956), MERV 6 (P/N 683958) or high-efficiency MERV 13 (P/N 683957)



Blowers

Motorized impellers (backward-inclined)

KEY FEATURES

Electronically and independently adjustable supply and exhaust blowers (FLEXControl)

Gauge ports on the door for fast and reliable airflow readings

Non-dust-loading backward-inclined impellers on totally enclosed motors

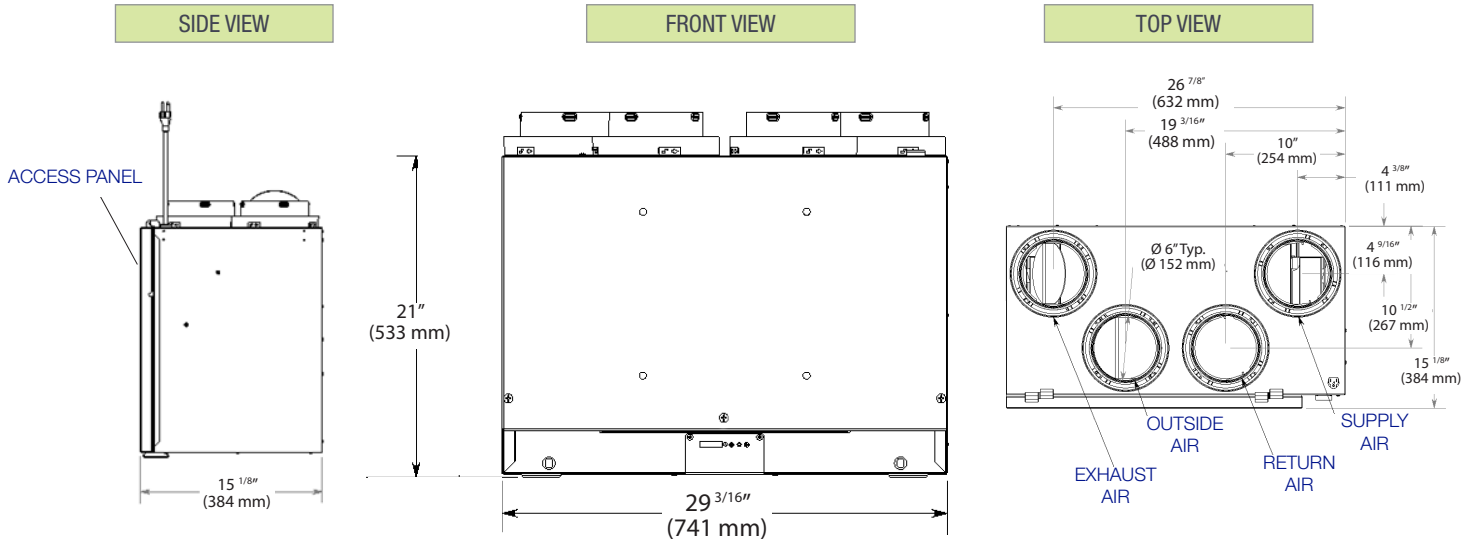
Twist-in collars for easy flex-duct attachment

Easy access to core and filters for cleaning

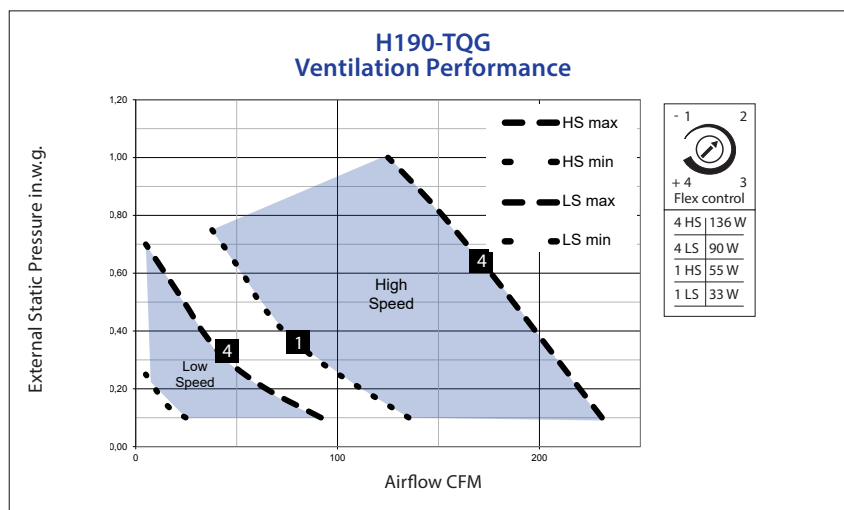
Extremely durable polypropylene core

Recirculation defrost to maintain a neutral pressure in the home, and using only the four duct connections. No fifth duct connection required

Dimensions & Performance



Supply Temperature		Net Airflow		Power Consumed (W)	Sensible Recovery Efficiency	Adjusted Sensible Recovery Efficiency
°F	°C	CFM	L/s			
32	0	64	30	60	75%	82%
32	0	80	38	66	73%	79%
32	0	121	57	116	68%	74%
-13	-25	68	32	91	67%	71%





H190-TRG

HEAT RECOVERY VENTILATOR

130 - 200 CFM at 4.0 in w.g. (ESP)



UNIT



CORE



CANADA



C22.2
no113
UL 1812

Product Description

Compact size, large performance – the H190-TRG heat recovery ventilator **exchanges 130 to 200 CFM at 0.4 in.w.g** (ESP) and recovers heat through its high-efficiency polypropylene core. The H190-TRG has been thoughtfully engineered for simple installation in almost any size home.

The H190-TRG with FLEXControl, airflow circuits can be calibrated electronically, eliminating the need for resistance-inducing balancing dampers and improving overall efficiency.



Recovery Core

Material: Polypropylene

Casing

Material: Pre-painted 24-gauge galvanized steel
Drain Connection: Ø 3/8" (Ø 10 mm)
Duct Connections: Ø 6" (Ø 152 mm)
Insulation: 1" Fiberglass with FSK
Width: 29-3/16" (749 mm)
Height: 21" (533 mm)
Depth: 15-1/8" (387 mm)
Weight: 50 lbs (22 kg); Shipping Weight: 51 lbs (23 kg)
Supply Damper: Motorized; Exhaust Damper: Gravity



Mounting

Suspended by chains with vibration-isolating springs
Wall-mounting accessory available (P/N 608575)



Electrical requirement

120 VAC, 60Hz, 1.8A, 216W
Cord Set: 48" (1219 mm) with ground



Frost control

Automatic timed recirculation, fifth port
Cycles controlled by a temperature sensor when the outdoor temperature drops below 23°F (-5°C)



Filters

Type : Aluminum (P/N 683959)
Option : Carbon (P/N 683956), MERV 6 (P/N 683958) or high-efficiency MERV 13 (P/N 683957)



Blowers

Motorized impellers (backward-inclined)

KEY FEATURES

Electronically and independently adjustable supply and exhaust blowers (FLEXControl)

Gauge ports on the door for fast and reliable airflow readings

Removable top-mounted collars

Non-dust-loading backward-inclined impellers on totally enclosed motors

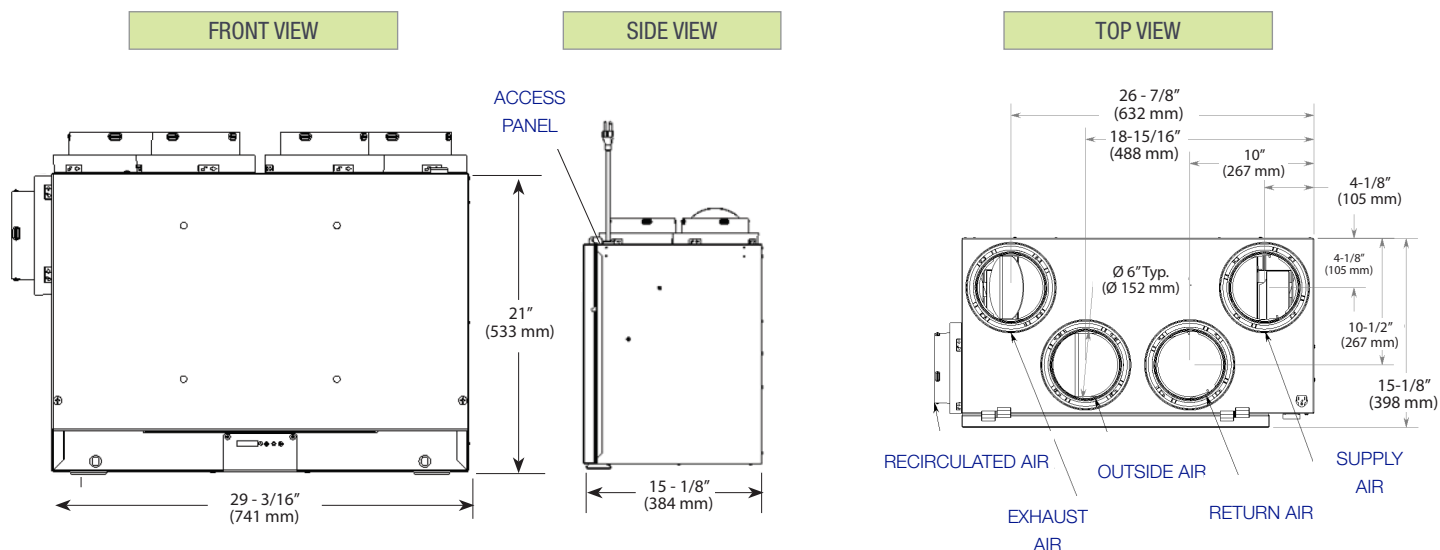
Twist-in collars for easy flex-duct attachment

Easy access to core and filters for cleaning

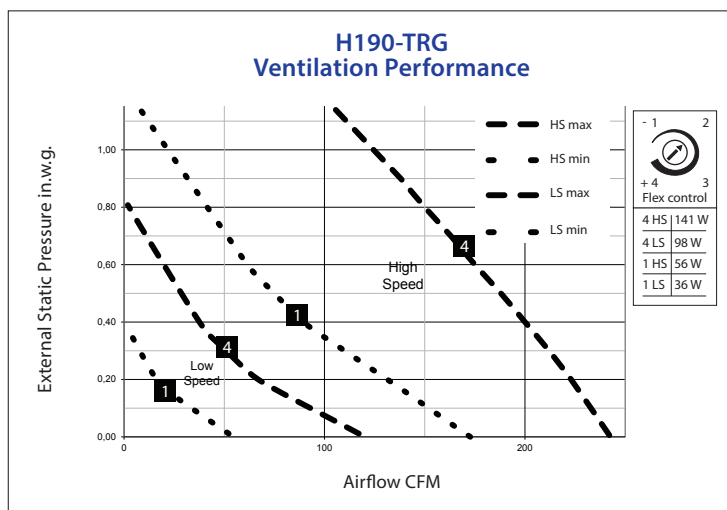
Extremely durable polypropylene core

Recirculation defrost to maintain neutral pressure in the home, and using only the four duct connections. No fifth duct connection required

Dimensions & Performance



Supply Temperature		Net Airflow		Power Consumed (W)	Sensible Recovery Efficiency	Apparent Sensible Effectiveness
°F	°C	CFM	L/s			
32	0	64	30	60	75%	82%
32	0	81	38	66	73%	80%
32	0	121	57	116	68%	75%
-13	-25	68	32	91	67%	70%



For more information, contact your Aldes sales advisor, visit aldes-na.com, call 1.800.255.7749, or find us on

