## ZONE REGISTER TERMINALS PRODUCT BROCHURE



## ZRT®

### DEMAND CONTROL VENTILATION SOLUTIONS

\*U.S. Pats. No. 7,766,734; 9, 201,428; 9,759,442



### #HealthyLiving

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# #HealthyLiving



### Flexibility & Dynamic Control

Aldes quiet, high-efficiency ventilation solutions are perfect for improving indoor air quality while saving energy and reducing operating costs. From bathroom exhaust to make-up air, new construction to renovation, Aldes has the right product for your project.

### Choosing a Model

			SE	Ν	IOUNTING	i	GRILLE	CEILING RADIATION OR	
	DESCRIPTION	EXHAUST	SUPPLY	CEILING	WALL	IN-LINE	INCLUDED	Fire Damper Included	
	ZRT <sup>®</sup> Zone Register Terminal	x		x			х		
	ZRT-S Zone Register Terminal		х	x			х		
	ZRT-F Zone Register Terminal with Ceiling Radiation Damper	x		x			х	х	
	ZRT-S-F Zone Register Terminal with Ceiling Radiation Damper		х	x			Х	х	
	ZRT-W Wall-Mount Zone Register Terminal	x			х		х		
	ZRT-WS Wall-Mount Zone Register Terminal		х		Х		х		
	ZRT-W-F Wall-Mount Zone Register Terminal with Fire Damper	x			х		х	х	
	ZRT-WS-F Wall-Mount Zone Register Terminal with Fire Damper		Х		х		х	х	
	ZRT-IL In-Line Zone Terminal	x	х			х			
	. NAME DESCRIPTION	SETPOINTS		MOUNTING			STATIC PRESSURE RANGE		
Compat	able with CAR-II & CAR3	2	3	CEILING	WALL	IN-LINE	STANDARD	HIGH	
	ZRT-PDIL	х				х	Х		
	ZRT-PDIL-HP	х				х		х	
	ZRT-3PDIL		х			х	х		
	ZRT-3PDIL-HP		х			х		x	

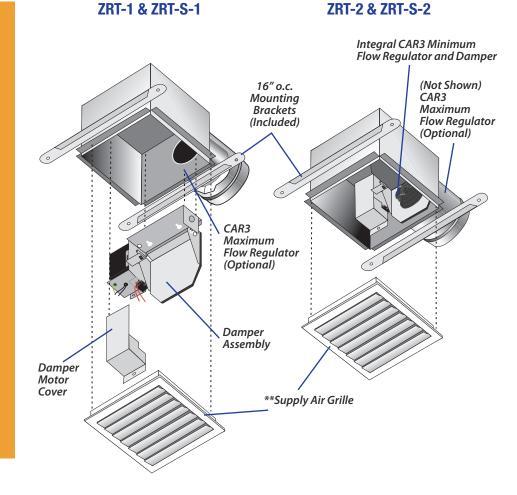
Notes: Wireless Communication Relays are an optional accessory; see **Page 11** for more information. Exhaust or Supply use is determined by the orientation of the CAR-II(s) and CAR3(s).

### **CEILING MOUNT ZRT®**

ZRT & ZRT-S MODELS CEILING MOUNT ZRT FOR ON-DEMAND OPTIONAL CONTINUOUS VENTILATION

### **PRODUCT DETAILS**

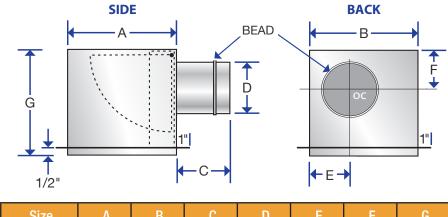
- Used in both large and small systems.
- Patented\* ZRT<sup>®</sup> model.
- Automatically operated with up to four different control schemes.
- Ceiling-mount to accomodate new or existing construction.
- 24 VAC, 120 VAC, or 230 VAC wiring.
- -1 models provide on-off control for on-demand ventilation, allowing central fan downsizing and promotes energy savings.
- -2 models can be used for combination lowflow indoor air quality ventilation and ondemand high-flow spot ventilation using the same central fan system.
- Optional Constant Airflow Regulators (CAR3) used to prevent noise and excessive energy consumption caused by over-ventilation, as well as fluctuations in airflow rates as total system pressure varies.
- White aluminum grille and mounting brackets included.
- ETL Safety Listed (3101377).



### \*U.S. Pat. No. 7,766,734

DIMENSIONS

\*\*ZRT-S model supplied with Supply Grille (shown). ZRT® model supplied with Exhaust/Return Grille (not shown).



Size	А	В	С	D	E	F	G
4″	8″	8″	4-1/2″	3-7/8″	2-1/2″	3-1/2″	7″
(100 mm)	(203 mm)	(203 mm)	(114 mm)	(98 mm)	(64 mm)	(89 mm)	(177 mm)
6″	10″	10″	5-1/2″	5-7/8″	3-1/2″	4-1/2″	8-1/2″
(150 mm)	(254 mm)	(254 mm)	(140 mm)	(149 mm)	(89 mm)	(114 mm)	(216 mm)

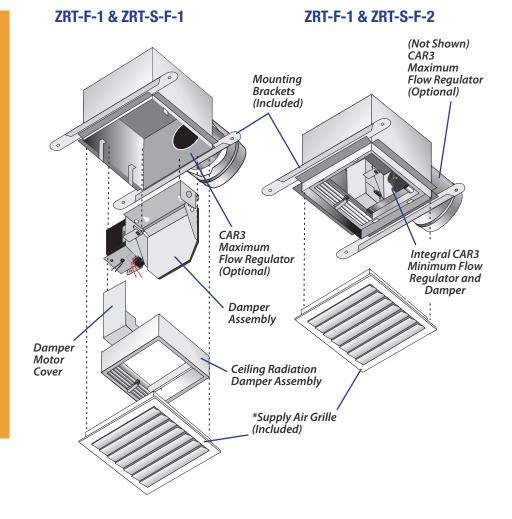
# 5

### **ZRT® WITH CEILING RADIATION DAMPER**

**ZRT-F & ZRT-S-F MODELS** CEILING MOUNT ZRT FOR ON-DEMAND AND OPTIONAL CONTINUOUS VENTILATION; WITH UL CLASSIFIED RADIATION DAMPER

### **PRODUCT DETAILS**

- Used in both large and small systems.
- Includes a 3-hour ceiling radiation damper.
  Automatically operated with up to four different control schemes.
- Ceiling-mount to accomodate new or existing construction.
- 24 VAC, 120 VAC, or 230 VAC wiring.
- -1 models provide on-off control for on-demand ventilation, while minimizing necessary horsepower and ventilation-induced heating and cooling loads on the building.
- -2 models can be used for combination lowflow indoor air quality ventilation and ondemand high-flow spot ventilation using the same central fan system.
- Optional Constant Airflow Regulators (CAR3) used to prevent noise and excessive energy consumption caused by over-ventilation, as well as fluctuations in airflow rates as total system pressure varies.
- White aluminum grille and mounting brackets included.
- ETL Safety Listed (3101377) and UL Classified Ceiling Radiation Damper (R15858).



\*ZRT-S-F model supplied with Supply Grille (shown). ZRT-F model supplied with Exhaust/Return Grille (not shown).

6″

(150 mm)

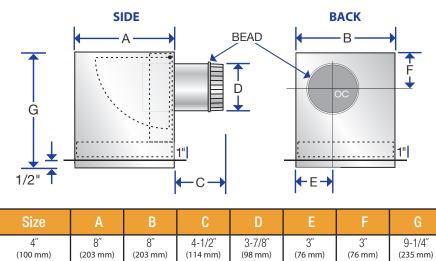
10″

(254 mm)

10″

(254 mm)

DIMENSIONS



5-1/2"

(140 mm)

5-7/8

(149 mm)

4″

(101 mm)

4″

(101 mm)

11-1/8"

(283 mm)

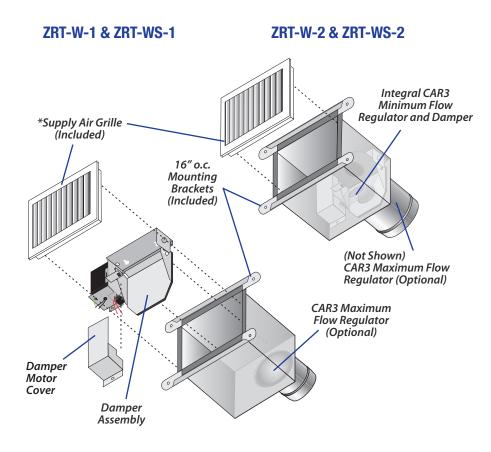
### WALL MOUNT ZRT®

ZRT-W & ZRT-WS MODELS WALL MOUNT ZRT FOR ON-DEMAND OPTIONAL CONTINUOUS VENTILATION

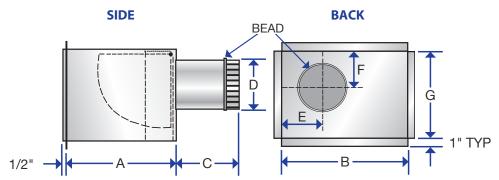
### PRODUCT DETAILS

- Used in both large and small systems.
- Automatically operated with up to four different control schemes.
- Wall-mount configure.
- 24 VAC, 120 VAC, or 230 VAC wiring.
- -1 models provide on-off control for on-demand ventilation, allowing central fan downsizing and promotes energy savings.
- -2 models can be used for combination lowflow indoor air quality ventilation and ondemand high-flow spot ventilation using the same central fan system.
- Optional Constant Airflow Regulators (CAR3) used to prevent noise and excessive energy consumption caused by over-ventilation, as well as fluctuations in airflow rates as total system pressure varies.
- White aluminum grille and mounting brackets included.
- ETL Safety Listed (3101377).

DIMENSIONS



\*ZRT-WS model supplied with Supply Grille (shown). ZRT-W model supplied with Exhaust/Return Grille (not shown).



Size	А	В	С	D	E	F	G
4″	7-1/2″	8″	4-1/2″	3-7/8″	2-1/2″	3-1/2″	6-1/4″
(100 mm)	(191 mm)	(203 mm)	(114 mm)	(98 mm)	(64 mm)	(89 mm)	(159 mm)
6″	9″	10″	5-1/2″	5-7/8″	3-1/2″	4-1/2″	8″
(150 mm)	(229 mm)	(254 mm)	(140 mm)	(149 mm)	(89 mm)	(114 mm)	(203 mm)

### • WALL MOUNT ZRT<sup>®</sup> WITH FIRE DAMPER

**ZRT-W-F & ZRT-WS-F MODELS** WALL MOUNT ZRT FOR ON-DEMAND AND OPTIONAL CONTINUOUS VENTILATION; WITH UL CLASSIFIED FIRE DAMPER

### **PRODUCT DETAILS**

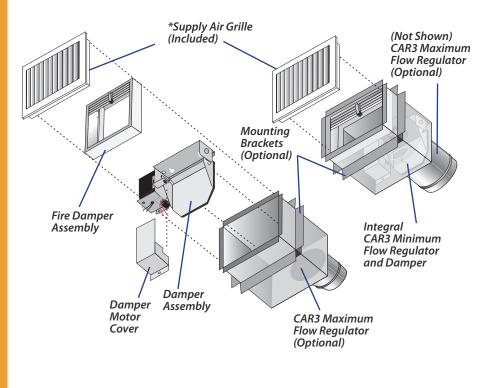
- Used in both large and small systems.
- Includes a 3-hour ceiling radiant damper.
- Automatically operated with up to four different control schemes.
- Wall-mount configure.
- 24 VAC, 120 VAC, or 230 VAC wiring.
- -1 models provide on-off control for on-demand ventilation, while minimizing necessary horsepower and ventilation-induced heating and cooling loads on the building.
- -2 models can be used for combination lowflow indoor air quality ventilation and ondemand high-flow spot ventilation using the same central fan system.
- Optional Constant Airflow Regulators (CAR3) used to prevent noise and excessive energy consumption caused by over-ventilation, as well as fluctuations in airflow rates as total system pressure varies.
- White aluminum grille included and mounting brackets optional.
- ETL Safety Listed (3101377) and UL Classified Fire Damper (R14128).

DIMENSIONS

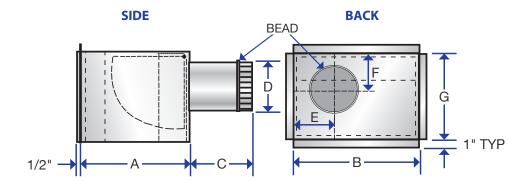
ZRT-W-F-1 & ZRT-WS-F-1

ZRT-W-F-1 & ZRT-WS-F-2

**ZRT®** 



\*ZRT-WS-F model supplied with Supply Grille (shown). ZRT-W-F model supplied with Exhaust/Return Grille (not shown).



Size	Α	В	С	D	E	F	G
4″	9-3/4″	8″	4-1/2″	3-7/8″	3″	3″	6-1/4″
(100 mm)	(248 mm)	(203 mm)	(114 mm)	(98 mm)	(76 mm)	(76 mm)	(159 mm)
6″	11-1/4″	10″	5-1/2″	5-7/8″	4″	4″	8″
(150 mm)	(286 mm)	(254 mm)	(140 mm)	(149 mm)	(101 mm)	(101 mm)	(203 mm)

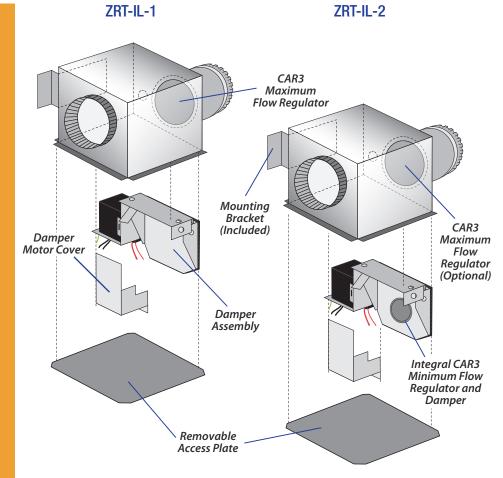
### **IN-LINE ZONE TERMINAL**

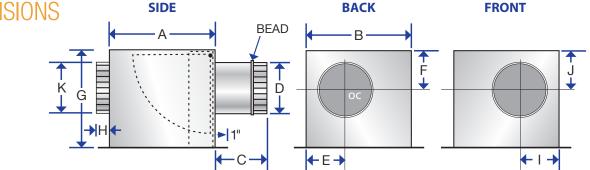
ZRT-IL MODELS IN-LINE ZONE TERMINAL FOR DUCT INSTALLATION; FOR ON-DEMAND AND OPTIONAL CONTINUOUS VENTILATION

### **PRODUCT DETAILS**

- Used in both large and small systems. •
- Automatically operated with up to three different control schemes.
- In-line mounting configuration to provide • versatile installation options such as above drop ceilings, between ceiling joints, or within a small soffit location.
- The ZRT-IL can be ordered in a supply or exhaust ventilation configuration.
- 24 VAC, 120 VAC, or 230 VAC wiring. •
- -1 models provide on-off control for on-demand • ventilation, allowing central fan downsizing and promotes energy savings.
- -2 models can be used for combination low-• flow indoor air quality ventilation and ondemand high-flow spot ventilation using the same central fan system.
- Optional Constant Airflow Regulators (CAR3) • used to prevent noise and excessive energy consumption caused by over-ventilation, as well as fluctuations in airflow rates as total system pressure varies.
- Removable access plate and mounting brackets included.
- ETL Safety Listed (3101377).

### DIMENSIONS





Size	А	В	С	D	E	F	G	Н	I	J	K
4″	8″	8″	4-1/2″	3-7/8″	2-1/2″	3-1/2″	6-1/2″	1-3/4″	2-1/2″	3-1/2″	3-7/8″
(100 mm)	(203 mm)	(203 mm)	(114 mm)	(98 mm)	(64 mm)	(89 mm)	(165 mm)	(44 mm)	(64 mm)	(89 mm)	(98 mm)
6″	10″	10″	5-1/2″	5-7/8″	3-1/2″	4-1/2″	8″	1-3/4″	3-1/2″	4-1/2″	5-7/8″
(150 mm)	(254 mm)	(254 mm)	(140 mm)	(149 mm)	(89 mm)	(114 mm)	(203 mm)	(44 mm)	(89 mm)	(114 mm)	(149 mm)

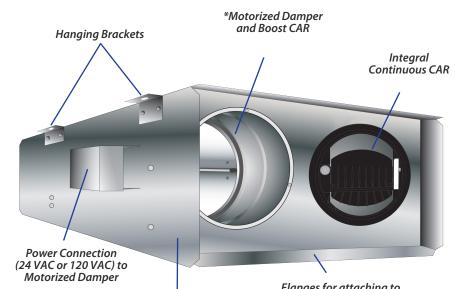
### PARALLEL DAMPER IN-LINE ZONE TERMINAL

**ZRT-PDIL & ZRT-PDIL-HP MODELS** PARALLEL DAMPER IN-LINE ZONE TERMINAL FOR DUCT INSTALLATION; 2-POSITION PRESSURE-INDEPENDENT TERMINALS FOR ON-DEMAND AND AUTOMATIC MIN/MAX AIRFLOW BALANCING IN STANDARD AND HIGH-PRESSURE APPLICATIONS

### **PRODUCT DETAILS**

- Used in both large and small systems.
- Allows for selection between a continuous, regulated low airflow rate, and an on-demand, regulated high airflow rate.
- Replaces individual fans or variable air volume (VAV) terminals.
- Two-position pressure-independent terminal with a control damper and integral passive regulators (CAR).
- Constant Airflow Regulators (CAR) are used to prevent noise and excessive energy consumption caused by over-ventilation, as well as fluctuations in airflow rates as total system pressure varies.
- Controls ventilation in multi-family dwellings, classrooms, large spaces, and provides makeup air for laboratories.
- In-line mounting configuration allows installation in a duct system.
- Can be used in a supply or exhaust configuration.
- 24 VAC or 120 VAC wiring.
- Removable access plate and hanging brackets included.
- ETL Safety Listed (3101377).

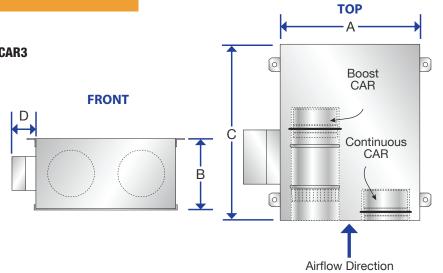
### DIMENSIONS Compatable with CAR-II & CAR3



Screw-On Access Plate

Flanges for attaching to rectangular duct in a sliptype duct connection

Size (Duct)	CAR3 Diameter Min.	CAR3 Diameter Max.	A	В	С	D
12″ x 6" (305 x 150 mm)	4″ (100 mm)	4″ (100 mm)	12″ (305 mm)	6″ (150 mm)	19-5/8″ (499 mm)	3-1/8″ (79 mm)
16″ x 8" (406 x 203 mm)	6″ (150 mm)	6″ (150 mm)	16″ (406 mm)	8″ (203 mm)	21-5/8″ (549 mm)	3-1/8″ (79 mm)
	CAR-II	CAR-II				
Size (Duct)	Diameter Min.	Diameter Max.	А	В	С	D
Size (Duct) 20″ x 10″ (508 x 254 mm)	Diameter	Diameter	A 20″ (508 mm)	B 10″ (254 mm)	C 23-5/8″ (600 mm)	D 3-1/8″ (79 mm)



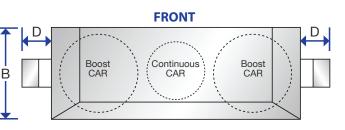
### **3 PARALLEL DAMPER IN-LINE ZONE TERMINAL**

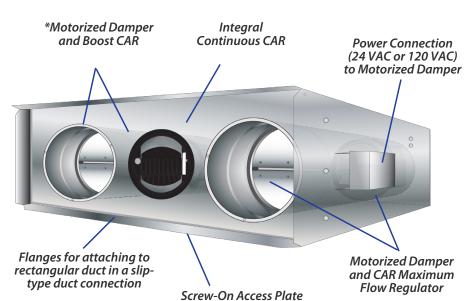
ZRT-PDIL & ZRT-PDIL-HP MODELS 3 PARALLEL DAMPER IN-LINE ZONE TERMINAL FOR DUCT INSTALLATION; 3-POSITION PRESSURE-INDEPENDENT TERMINALS FOR ON-DEMAND AND AUTOMATIC MIN/MAX AIRFLOW BALANCING IN STANDARD AND HIGH-PRESSURE APPLICATIONS

### **PRODUCT DETAILS**

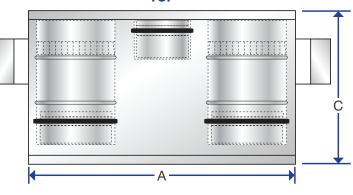
- Used in both large and small systems.
- Allows for selection between low-flow, medium-flow, and high-flow ventilation rates.
- Replaces individual fans or variable air volume (VAV) terminals.
- Three-position pressure-independent terminal with two control dampers and integral passive regulators (CAR).
- Constant Airflow Regulators (CAR) are used to prevent noise and excessive energy consumption caused by over-ventilation, as well as fluctuations in airflow rates as total system pressure varies.
- Two motorized dampers can be powered separately to allow for three distinct airflows or powered in parallel for two distinct airflows.
- In-line mounting configuration allows installation in a duct system.
- Can be used in a supply or exhaust configuration.
- 24 VAC or 120 VAC wiring.
- Removable access plate and hanging brackets included.
- ETL Safety Listed (3101377).







Size (Duct)	CAR3 Diameter Min.	CAR-II Diameter Max.	А	В	С	D
28″ x 10"	6″	(2) 8″	28″	10″	24-5/8″	3-1/8″
(711 x 254 mm)	(150 mm)	(203 mm)	(711 mm)	(254 mm)	(625 mm)	(79 mm)
Size (Duct)	CAR-II Diameter Min.	CAR-II Diameter Max.	А	В	С	D
30″ x 10"	8″	(2) 8″	30″	10″	24-5/8″	3-1/8″
(762 x 254 mm)	(203 mm)	(203 mm)	(762 mm)	(254 mm)	(625 mm)	(79 mm)
34″ x 12"	8″	(2) 10″	34″	12″	26-5/8″	3-1/8″
(864 x 305 mm)	(203 mm)	(254 mm)	(864 mm)	(305 mm)	(676 mm)	(79 mm)
36″ x 12"	10″	(2) 10″	36″	12″	26-5/8″	3-1/8″
(914 x 305 mm)	(254 mm)	(254 mm)	(914 mm)	(305 mm)	(676 mm)	(79 mm)



ТОР

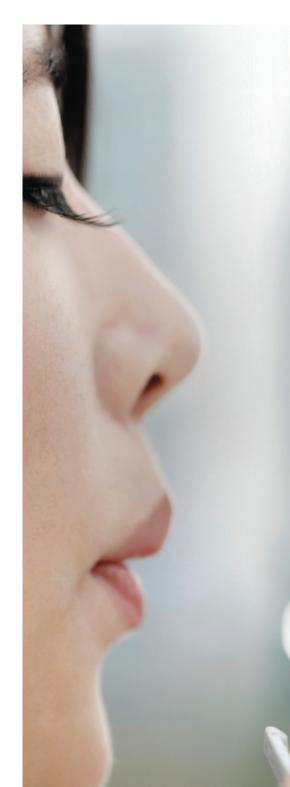
### **ZRT® WITH WIRELESS COMMUNICATION RELAYS**

Zone Register Terminals (ZRT<sup>®</sup>) are available with wireless communication relays that respond to occupancy-based control systems. These solutions are aptly suited for hotels, dormitories, and apartments.

ZRT®

In the example below, the wall-mount supply ZRT<sup>®</sup> in the living area provides ventilation/make-up air when the space is occupied. The bathroom ZRT<sup>®</sup> provides on-demand exhaust airflow boost equal to the supply air rate, or higher if desired, and can be activated by the supply ZRT<sup>®</sup> or local controller.

Wireless communication relays or the room control manufacturer are available from ALDES North America. Relays by Telkonet<sup>®</sup>, InnCom<sup>®</sup>, and Magnum Energy Solutions<sup>™</sup> only. Contact ALDES North America for more information.



# #HealthyLiving

Engineering tomorrow's solutions is more than an idea – it is a guiding principle. Every Aldes product is equal parts innovation and experience. Efficient and respectful solutions of the environment which allow to renew and purify the indoor air delivering improved air quality. From automatic airflow controls to advanced heat and energy recovery ventilators, Aldes products can be found in high-performing homes, schools, hotels and buildings across North America. Healthy Living, much more than a movement, embody our benevolence, our sense of responsibility and pioneering spirit.

# aldes

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

