

ULTRA-ZONE™ FORCED AIR ZONE CONTROLS — EWC

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HOW TO ORDER AN ULTRA-ZONE SYSTEM:

Control Panel



NCM
1 Stage Heat/Cool
2 Stage Heat/ 1 Stage Cool
 2-3 zones - NCM-300
 For larger zone systems
 See BMPlus series

BMPlus
1 Stage Heat/Cool
3 Stage Heat/2 Stage Cool
 2-3 zones (1) BMPlus 3000
 4-5 zones (1) BMPlus 5000
 6-7 zones (1) BMPlus 7000
 For larger zone systems
 See UZC series

UZC
1 Stage Heat/Cool
2 Stage Heat/ 2 Stage Cool
3 Stage Heat/ 2 Stage Cool
4 Stage Heat/ 2 Stage Cool
 2-4 zones (1) UZC-4
 5-6 zones (1) UZC-6
 7-8 zones (1) UZC-8
 9-10 zones (1) UZC-10
 11-12 zones (1) UZC-12
 13-14 zones (1) UZC-14
 15-16 zones (1) UZC-16
 Up to 20 zones,
 2 zone increments

Dampers



Round

4"-20" URD (3-wire PO/PC)
 4"-20" RSD (2-wire spring return)



Rectangular

(W"xH") ND (3-wire PO/PC)
 (W"xH") ND-RSD (2-wire Spring Return)
 Motor is always mounted on
 2nd dimension

By-Pass Dampers (If Necessary)



Electronic (Modulating)
 8"-18" EBD (Round)
 W"xH" EBD Rectangular
 Any Size (Call Factory)

Round Barometric
 8"-16" PRD-RD

Rectangular Barometric
 W"xH" PRD

Zone Thermostats



**Digital Programmable
 Auto Changeover Touchscreen**
 EWT-3102

**Digital Programmable
 Auto or Manual Changeover**
 EWT-3707

Digital Non-Programmable
 EWT-3611

Transformer



40VA for every (20) URD and ND dampers
 40VA for every (5) RSD and ND-RSD dampers

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UNIVERSAL ZONE CONTROL SYSTEMS

MODEL UZC-4 (REVISION 4) AND MODEL ZXM-2 (EXPANSION PANEL)

The Ultra-Zone Model UZC is a 4 zone control panel that features auto changeover between heating and cooling modes. The UZC will accept the first call of heating or cooling and turn the system on and close the dampers to the non-calling zones. If another zone calls for the opposite mode, the UZC will hold that call until the first call is satisfied or until a 20 minute timer has passed. Once accomplished, the UZC will go through a time delay to purge the conditioned air out of the system.

The purge time is the total time the fan will remain on with the last calling dampers remaining open. This can be either 1-1/2 or 3 minutes or turned off. The automatic changeover time is fixed at 4 minutes including the purge time. At the end of this time the system will activate the opposite mode of the HVAC system.

The UZC will control Single Stage 2, 3, and 4 Stage conventional, geothermal or Dual Fuel heat pumps, without the need for dual fuel kits. Also single or multi-stage gas, oil, and hydronic HVAC systems with either single or two stage cooling and constant or variable speed fan systems. Any and all of these systems can be controlled with most any off the shelf thermostats.

The UZC allows for the use of any type of thermostat on any zone with any type of HVAC equipment. This is done with a staging timer built into the UZC. A field adjustable timer between 7 – 42 minutes will energize the staging up when necessary if zones are not satisfying based upon the time set on the timer. This feature allows the installer to use single stage thermostats with multi-stage equipment, a very user friendly feature.

There are two (2) energy saving features that the UZC incorporates that can save homeowners more than 40% on utility bills. The first is Ultra-Zone's 50% rule. This feature will not allow staging up to occur if less than 50% of the zones are in demand. This will prevent the HVAC system from consuming unneeded energy. The second is using their OAS sensor with the UZC to sense the outside air temperature and also limit the staging up process if the temperature is too mild. The OAS works with an adjustable setting between 7 and 42 degrees, if the temperature is above the set point, again the UZC will prevent the use of unneeded energy consumption.

The UZC also features two (2) safety controls built into the panel. The first is its ability to have a "Fire Alarm Interlock".

If the UZC is wired into the fire alarm system and a signal is detected the UZC will shut down the HVAC system and close all dampers. The second safety feature is "Demand Based Ventilation". This allows the UZC to wire into a CO₂ monitor and control Fresh Air if needed. If the UZC detects a signal from the Carbon Dioxide monitor the panel will open all dampers, open the Fresh Air damper and turn the HVAC fan on, helping to vent the building.

Other Industry setting features include:

Electronic Bypass Damper Interface

Achieves "Latent Cooling" and "Quiet Mode" start up

Adjustable Supply Air Sensor

Prevents over heating or cooling

Adjustable Heat Differential Potentiometer

Allows the SAS to be mounted in any location

One Zone Feature

Allows one thermostat to control multiple zones for set back

Computer Watchdog Circuitry

Prevents lock-ups from power failures and power interruptions.

Manual and Automatic Thermal Circuit Breakers

Protects the UZC from wiring shorts

Dehumidify or Humidify Interface

Auxiliary contacts to help increase comfort operations

Return Air Monitoring

Enhanced HVAC energy savings

Variable Speed Interface

Slows down fan speed if less than 25% of zones are calling



Model UZC-4



Model ZXM-2



SAS



OAS

ITEM #	MODEL	DESCRIPTION
769811	UZC-4	4 Zone Control Panel
769793	SAS	Supply Air Sensor
769792	OAS	Outdoor Air Supply Sensor
769808	ZXM-2	Expansion Panel

NOTE: For systems larger than 16 zones, call your local ECCO Supply™ Sales Branch for pricing.

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ZONE CONTROL SYSTEMS

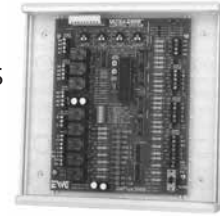
BMPLUS SERIES

The BMPlus control panel is a single stage, two stage, dual fuel, and heat pump compatible panel controlling up to seven zones. The system features automatic changeover and fan control from any zone with a built in computer “watchdog circuit” to insure proper operation. The BMPlus is supplied with an SAS sensor for high and low temperature limit control that has field adjustable temperature limits.

The control panel is compatible with any 3 or 4 wire thermostat on any zone and allows for single stage thermostats to control heat-pump or multi-stage equipment. The BMPlus is also compatible with any two stage heat pump thermostat which can be used on all zones. The unique 50% rule (if set) will inhibit second stage if less than half of the total number of zones are calling. The intelligent design of the BMPlus eliminates the need for a dual fuel kit for heat pumps. The panel can control staging based on time or outdoor temperature with the optional OAS sensor.

The convenient “One Zone Mode” allows for the entire zoning system to be programmed from one location. This can be controlled by the thermostat or the optional VAC switch. This is great for vacation periods or night set back applications.

ITEM #	MODEL	DESCRIPTION
769801	BMPlus-3000	3 Zone Control Panel
769798	BMPlus-5000	5 Zone Control Panel
769793	SAS	Supply Air Sensor
769792	OAS	Outdoor Air Supply Sensor



BMPlus-3000



SAS Included



OAS

NCM-300

The NCM-300 control panel is compatible with single stage, dual fuel and heat pump systems. The panel is configured for 2 or 3 zones and non-expandable. This is ideal for residential new construction allowing a very competitive product to be sold to the homebuilder. The NCM-300 features automatic changeover and fan control from any zone with a built in computer “watchdog circuit” to insure proper operation. The panel is shipped with an SAS sensor for high and low limit protection control. The SAS has adjustable potentiometers for the heating and cooling limits for different geographical locations. The NCM-300 control panel is compatible with any 3 or 4 wire thermostat on any zone and allows for single stage thermostats to control heat pumps or multi-stage systems with an adjustable timer. The NCM-300 is also compatible with two stage heat pump and dual fuel thermostats.

The opposing system timer ensures that no zone will starve for needed conditioned air, this can also be turned off to allow for maximum run times. The “One Zone” allows the occupants to flip a switch (VAC) and put the panel into vacation mode. This mode sets the zoning system based on the program of the zone one thermostat allowing the whole system to be programmed from one location. The LED bank allows for instant recognition and detection of system status for the installer.

The NCM-300 allows for dual transformer systems (ex. hydro-air, oil burners, hot water coils, etc.) to wire up without the need for additional relays. EWC has incorporated an isolation relay on the NCM-300 to allow for easy wiring to these systems.

ITEM #	MODEL	DESCRIPTION
769796	NCM-300	2 – 3 Zone Control Panel



NCM-300



SAS Included

MOTORIZED DAMPERS

MODEL URD AND RSD ROUND DAMPERS

Model URD and RSD are round, single blade dampers with a shutoff seal that gives the damper a 98% closure.

URD

The motor for the URD has no moving switches or parts to burn out. The actuator possesses 18" lbs of torque, manual gear release and a powered open/powered close operation. The URD features "fail safe" LED's that will indicate the position of the blade without the need to cut holes or remove the damper from the ductwork. The positional LED's will only illuminate when the blade is in the full open or full closed position.

ITEM #	MODEL	DESCRIPTION
769750	URD	6" Round Damper
769751	URD	7" Round Damper
769752	URD	8" Round Damper
769753	URD	9" Round Damper
769754	URD	10" Round Damper
769756	URD	12" Round Damper
769758	URD	14" Round Damper
769760	URD	16" Round Damper



RSD

The RSD is a spring return motor. The damper is field reversible from power closed/spring open to power open/spring closed. the motor possesses 3" lbs of torque. The 18" and 20" RSD's have a motor with 18" lbs of torque.

ITEM #	MODEL	DESCRIPTION
769892	RSD	6" Round Damper
769894	RSD	8" Round Damper
769896	RSD	10" Round Damper
769897	RSD	12" Round Damper
769898	RSD	14" Round Damper



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MOTORIZED DAMPERS (cont'd)

ND SERIES DAMPERS

The ND series of Ultra-Zone dampers was designed with the installer and homeowners in mind. This damper is easy to install and easy to checkout. The LED display allows the installer to visually check the damper operation. With a sturdier frame, the damper installs in the duct much faster and easier and the nylon bushings insure quieter operation. This is a feature that homeowners will never hear about! Quieter operation and a longer life motor equals NO call backs.

The motor for the ND damper is driven by 17" lbs of torque, possesses a manual gear release, 3 wire power open/power closed operation and fail-safe LED's for quick diagnostic checks. The motor is UL listed and NEMA Class 2 certified. The easy access, quick connecting terminal block eliminates the need for wire nuts and allows for trouble free use.

The ND damper has a 97% leak proof rating. Overlapping blades and a strong positive shut-off motor insures accurate control of all zones. The ND dampers combined with an Ultra-Zone zoning system provides the most comfortable and reliable system in the industry.

The ND is available in 8" × 6" thru 30" × 30" in even inch increments. The motor will be mounted on the second dimension when ordered. For example, a 16" × 8" damper will have the motor mounted on the 8" dimension, while an 8" × 16" will have the motor mounted on the 16" dimension. This will alleviate the confusion between side mount and bottom mount dampers.

For added flexibility, ND dampers can also be provided with a spring return style motor.

NOTE: Specify "spring closed" or "spring open" when ordering.

Side Mount

ITEM #	MODEL	SIZE (")
769761	ND	8 × 8
769812	ND	10 × 8
769762	ND	10 × 10
769814	ND	12 × 8
769815	ND	12 × 10
769817	ND	14 × 8
769818	ND	14 × 10
769819	ND	14 × 12
769769	ND	14 × 14
769821	ND	16 × 8
769822	ND	16 × 10
769824	ND	18 × 8
769827	ND	20 × 8
769829	ND	20 × 12
769828	ND	22 × 8
769831	ND	22 × 10
769836	ND	24 × 8
769838	ND	24 × 10



NOTE: Motor is always mounted on second dimension specified.

MOTORIZED DAMPERS (cont'd)
ND SERIES DAMPERS (cont'd)
Bottom Mount

ITEM #	MODEL	SIZE (")
769764	ND	8 × 10
769766	ND	8 × 12
769768	ND	8 × 14
769770	ND	8 × 16
769771	ND	8 × 18
769776	ND	8 × 20
769850	ND	8 × 22
769775	ND	8 × 24
769763	ND	10 × 12
769765	ND	10 × 14
769777	ND	10 × 16
769778	ND	10 × 18
769774	ND	10 × 20
769852	ND	10 × 22
769779	ND	10 × 24
769767	ND	12 × 14
769854	ND	12 × 16
769773	ND	12 × 20



NOTE: Motor is always mounted on second dimension specified.

STATIC PRESSURE CONTROL DAMPERS

The EBD style by-pass are self-contained units that give you the static control mounted to the damper. It is an "all-in-one" design that makes the installation process much easier than most electronic by-pass dampers. The static pressure can be adjusted in the field between 0.1" to 4" of pressure. This is done by the turn of a set-screw. Requires 24VAC to operate. Tubing and pitot tube are included.

MODEL EBD – ROUND

ITEM #	MODEL	SIZE (")
769804	EBD	10
769806	EBD	12



Model EBD –Round

NOTE: Model EBD is for use with motorized dampers ND or URD style. Please refer to index.

MODEL EBD – RECTANGULAR

ITEM #	MODEL	SIZE (")
769862	EBD	12 × 10
769880	EBD	PS-4 Pressure Switch Only


 Model EBD –
Rectangular


Model PS-4

NOTE: Use with motorized dampers ND and URD style. Please refer to index.

(cont'd on next page)

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STATIC PRESSURE CONTROL DAMPERS (cont'd)

MODEL PRD

Model PRD pressure regulating damper is a single blade, steel, barometric damper with a counter balanced weighted arm. The PRD provides an economical solution for by-passing excess air when zone dampers close. Damper adjustment is done by adjusting the supplied weights and by offsetting the arm.



ITEM #	MODEL	SIZE (")	CFM
769790	PRD	12 × 8	1000
769791	PRD	12 × 10	1200
769788	PRD	12 × 12	1400
769789	PRD	20 × 8	1600

NOTE: Other sizes available upon request.

MODEL PRD-RD

Model PRD-RD pressure regulating damper is a single blade, round variation of a barometric relief damper. This is the simplest, most economical way of by-passing excess static pressure in multi-zone applications. Resistance is controlled by offsetting the arm and adjusting the weights. The arm can be inserted into either side of the damper for added versatility.



ITEM #	MODEL	SIZE (")	CFM
769780	PRD-RD	8	400
769782	PRD-RD	10	750
769784	PRD-RD	12	1200
769786	PRD-RD	14	1800
769787	PRD-RD	16	2400

NOTE: Other sizes available upon request.

WEIGHTS AND ARMS (ADDITIONAL)

ITEM #	MODEL /DESCRIPTION
769742	PRD-Weight and Arm
769882	PRD-Weight

PARTS AND ACCESSORIES

ITEM #	MODEL	DESCRIPTION
769800	T40-VA-PT	Plate mounted 24V 40VA transformer for use with ULTRA-ZONE dampers and control systems.
769878	CPLS	Coil Protection Switch monitors cooling coil temperature and protects against coil freeze-up. Stops compressor below 37° and restarts above 47°. (Not adjustable) Mounts on a 3/4" suction line.
769795	MRK	Motor replacement kit used for all styles of ND-URD and RDN dampers. Kit comes complete with all necessary brackets and screws.



T40-VA-PT



CPLS



MRK

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