

ULTRA-ZONE[®]

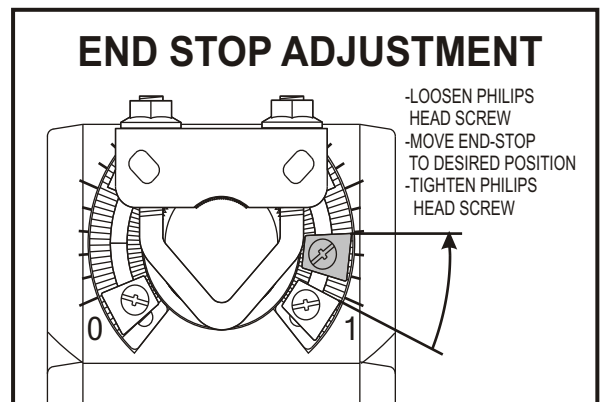
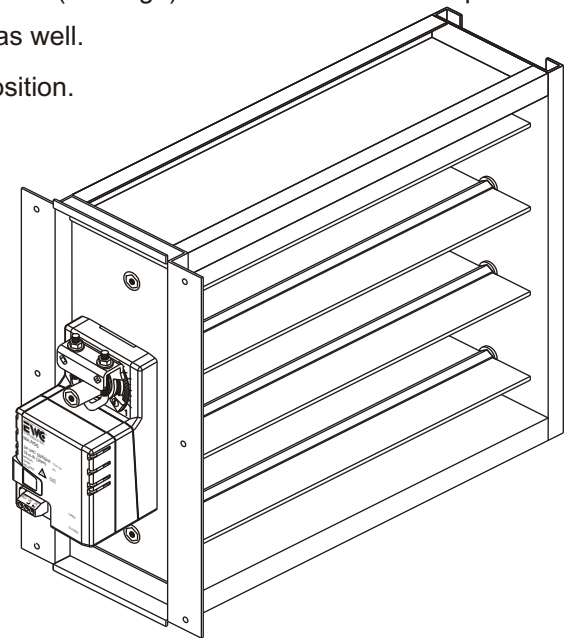
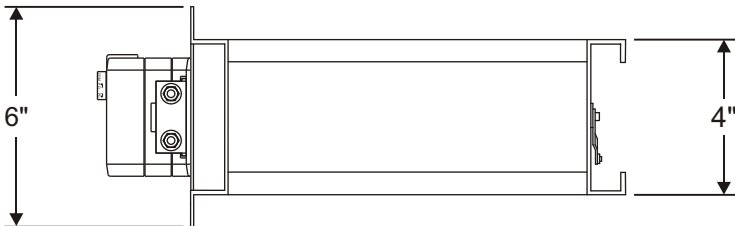
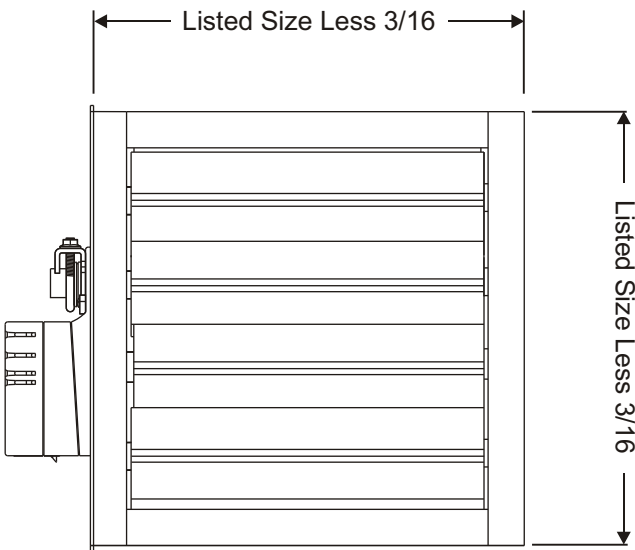
Forced Air Zone Controls

SUBMITTAL SHEET

Model ND Rectangular Dampers
with MA-ND5 Actuator

- The ND Damper is constructed using Heavy Duty 0.80" extruded aluminum.
- Nylon Bearings for quiet operation.
- Overlapping parallel blade design insures low leakage.
- Designed to operate at static pressures up to 1.5" w.c.
- The UL Listed Motor Actuator is a 24vac 3 wire power open/ power close type.
- The motor actuator is rated at 18"lbs. of torque. Superior to low torque Spring type motors.
- The Motor Actuator housing has a NEMA1 Rating.
- Integrated End-Stop Adjustment allows for a percentage of Relief Air (Leakage) to be set when the damper is powered to closed and/or you may set a maximum open position as well.
- Bright green and red LED's Indicate damper open and closed position.

DIMENSIONAL DRAWINGS



385 Hwy. 33
Englishtown, NJ 07726
Ph: 800-446-3110
Fx: 732-446-5362

SUBMITTAL FORM

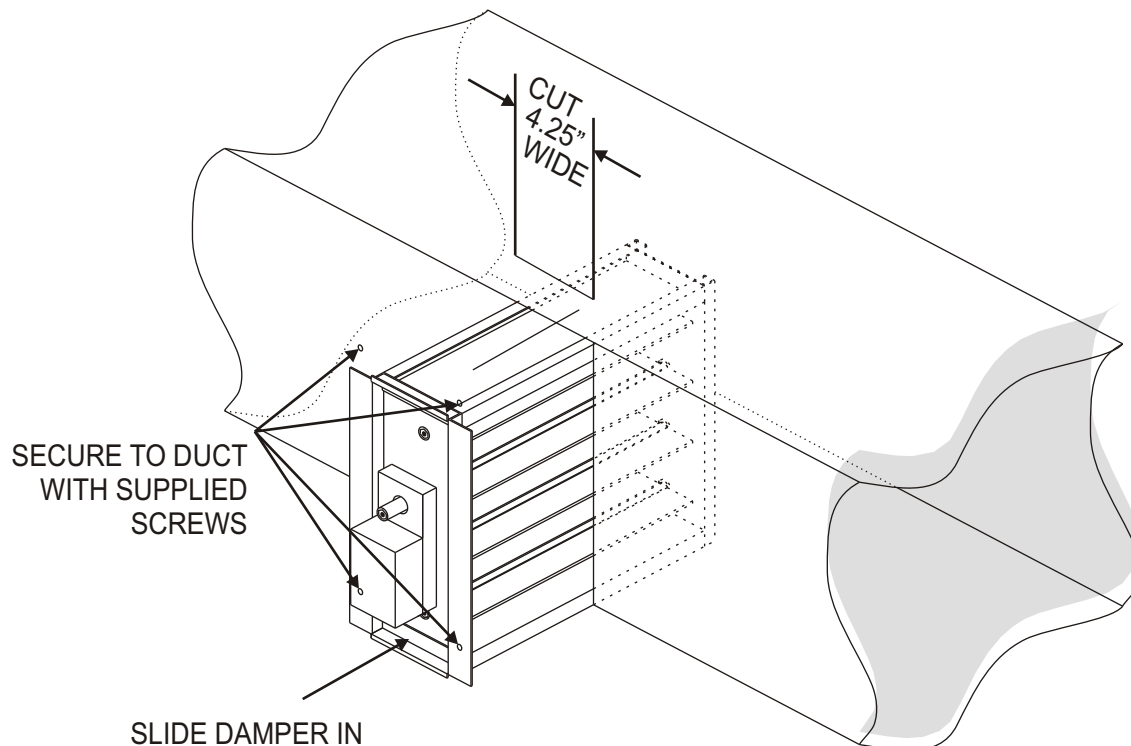
SUBMITTED BY: _____
 JOB: _____
 ARCHITECT: _____
 ENGINEER: _____
 CONTRACTOR: _____
 LOCATION: _____

SIZING

- ND Dampers are available in sizes 8" x 6" thru 30" x 30" in one inch increments.
- Custom Sizes can be manufactured, contact EWC Controls Inc. Make sure to specify your required dimensions.
- The 2nd specified dimension is ALWAYS the motor side. i.e. 12" X 14" ND Damper will place the motor on the 14" side.

DAMPER INSTALLATION

On the side of the duct, where the damper is to be mounted, cut a 4.25" wide slotted opening. Slide the damper into the opening and secure the damper to the duct with the sheet metal screws. *Airflow can be from either direction and the Motor can be oriented in any position.* Larger sizes may require additional support by securing the back of the damper.

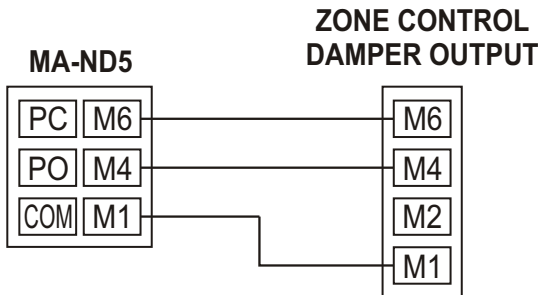


WIRING SOLUTIONS

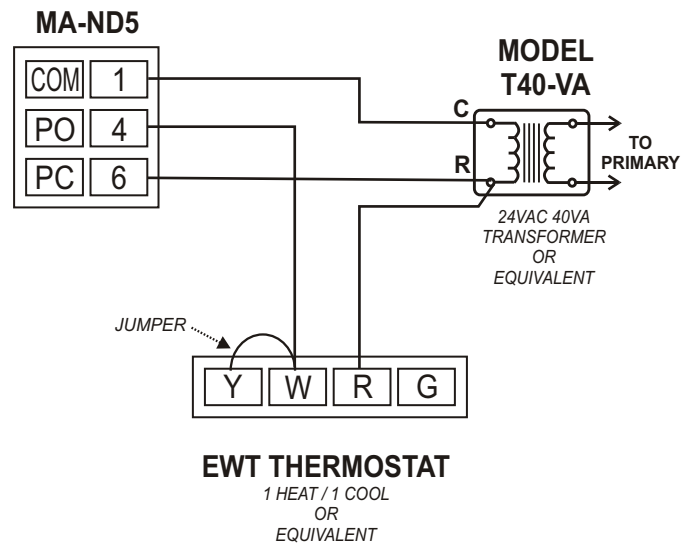
Motor Actuator Terminals

| TERMINAL | DESCRIPTION |
|----------|--------------------|
| 1 / COM | 24v Common |
| 4 / PO | 24v Power to Open |
| 6 / PC | 24v Power to Close |

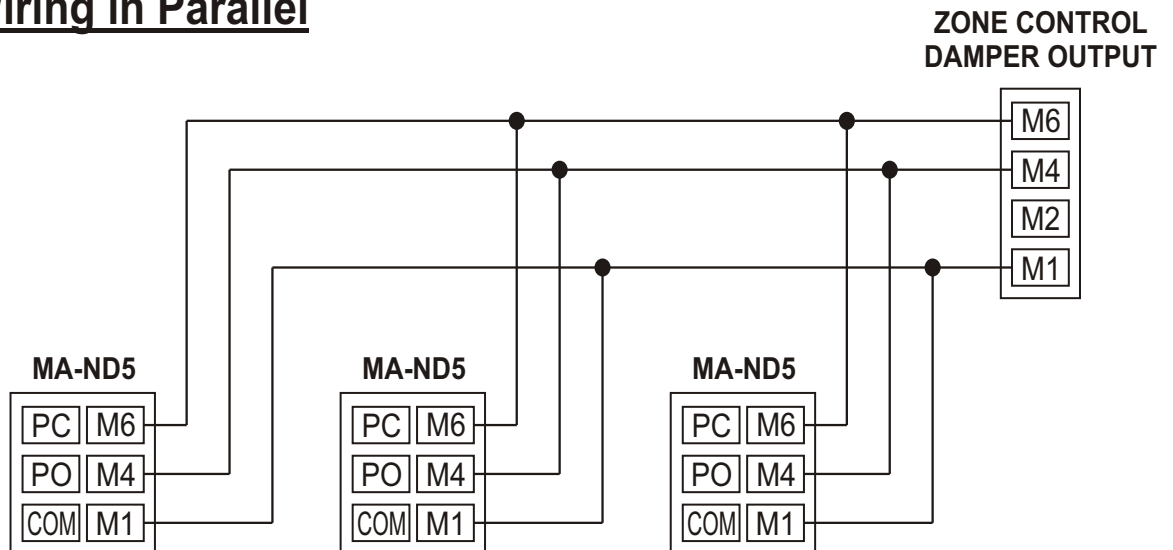
Wiring to a Zone Control Panel



Wiring a Thermostat to Control a Single Damper



Wiring in Parallel



ULTRA-ZONE®

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Model ND Rectangular Dampers
with MA-ND5 Actuator

Model ND Rectangular Net Free area & CFM

| | | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 |
|----|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 6 | Free Area (Sq. In.) | 19.46 | 28.08 | 34.84 | 41.6 | 48.35 | 55.11 | 63.74 | 70.49 | 77.25 | 84.01 | 90.76 | 99.39 |
| | CFM | 150 | 190 | 220 | 260 | 340 | 360 | 410 | 450 | 480 | 540 | 560 | 600 |
| 8 | Free Area (Sq. In.) | 28.49 | 41.11 | 51 | 60.89 | 70.78 | 80.67 | 93.3 | 103.19 | 113.08 | 122.97 | 132.86 | 145.49 |
| | CFM | 180 | 270 | 350 | 390 | 470 | 510 | 630 | 730 | 750 | 820 | 840 | 950 |
| 10 | Free Area (Sq. In.) | 37.51 | 54.14 | 67.16 | 80.19 | 93.21 | 106.24 | 122.86 | 135.88 | 148.91 | 161.93 | 174.96 | 191.58 |
| | CFM | 250 | 360 | 450 | 540 | 630 | 720 | 850 | 920 | 1040 | 1110 | 1180 | 1300 |
| 12 | Free Area (Sq. In.) | 46.54 | 67.16 | 83.32 | 99.48 | 115.64 | 131.8 | 152.42 | 168.58 | 184.74 | 200.9 | 217.06 | 237.68 |
| | CFM | 310 | 450 | 550 | 690 | 780 | 930 | 1080 | 1150 | 1340 | 1410 | 1530 | 1690 |
| 14 | Free Area (Sq. In.) | 55.56 | 80.19 | 99.48 | 118.77 | 138.07 | 157.36 | 181.98 | 201.28 | 220.57 | 239.86 | 259.16 | 283.78 |
| | CFM | 340 | 540 | 690 | 820 | 910 | 1070 | 1360 | 1490 | 1620 | 1680 | 1790 | 2160 |
| 16 | Free Area (Sq. In.) | 64.59 | 93.21 | 115.64 | 138.07 | 160.49 | 182.92 | 211.55 | 233.97 | 256.4 | 278.83 | 301.25 | 329.88 |
| | CFM | 400 | 630 | 780 | 910 | 1120 | 1280 | 1610 | 1740 | 1860 | 2040 | 2300 | 2590 |
| 18 | Free Area (Sq. In.) | 73.62 | 106.24 | 131.8 | 157.36 | 182.92 | 208.48 | 241.11 | 266.67 | 292.23 | 317.79 | 343.35 | 375.98 |
| | CFM | 420 | 720 | 930 | 1070 | 1280 | 1440 | 1790 | 2080 | 2200 | 2380 | 2480 | 3070 |
| 20 | Free Area (Sq. In.) | 82.64 | 119.27 | 147.96 | 176.66 | 205.35 | 234.05 | 270.67 | 299.36 | 328.06 | 356.75 | 385.45 | 422.07 |
| | CFM | 460 | 790 | 990 | 1240 | 1450 | 1590 | 2070 | 2250 | 2590 | 2770 | 2940 | 3360 |
| 22 | Free Area (Sq. In.) | 91.67 | 132.29 | 164.12 | 195.95 | 227.78 | 259.61 | 300.23 | 332.06 | 363.89 | 395.72 | 427.55 | 468.17 |
| | CFM | 530 | 880 | 1100 | 1340 | 1550 | 1840 | 2250 | 2580 | 2820 | 2970 | 3180 | 4220 |
| 24 | Free Area (Sq. In.) | 100.69 | 145.32 | 180.28 | 215.24 | 250.21 | 285.17 | 329.79 | 364.76 | 399.72 | 434.68 | 469.65 | 514.27 |
| | CFM | 500 | 950 | 1210 | 1440 | 1640 | 1920 | 2590 | 2820 | 3030 | 3450 | 3670 | 4570 |
| 26 | Free Area (Sq. In.) | 109.72 | 158.34 | 196.44 | 234.54 | 272.63 | 310.73 | 359.36 | 397.45 | 435.55 | 473.65 | 511.74 | 560.37 |
| | CFM | 500 | 1060 | 1260 | 1580 | 1900 | 2210 | 2770 | 3210 | 3450 | 3730 | 3910 | 5560 |
| 28 | Free Area (Sq. In.) | 118.75 | 171.37 | 212.6 | 253.83 | 295.06 | 336.29 | 388.92 | 430.15 | 471.38 | 512.61 | 553.84 | 606.47 |
| | CFM | 520 | 1110 | 1440 | 1670 | 1980 | 2280 | 3170 | 3470 | 3670 | 3910 | 4890 | 6030 |
| 30 | Free Area (Sq. In.) | 127.77 | 184.4 | 228.76 | 273.13 | 317.49 | 361.86 | 418.48 | 462.84 | 507.21 | 551.57 | 595.94 | 652.56 |
| | CFM | 510 | 1160 | 1490 | 1750 | 2050 | 2400 | 3360 | 3630 | 3860 | 4900 | 5220 | 6500 |