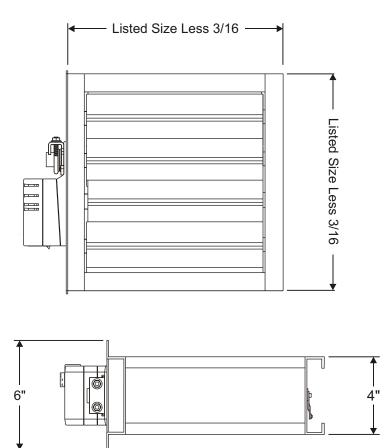


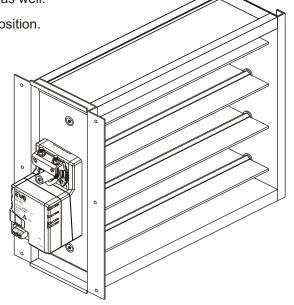
SUBMITTAL SHEET

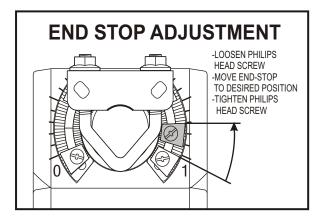
Model ND Rectangular Dampers with MA-ND5 Actuator

- 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







SUBMITTAL FORM

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



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

> P/N 090377A0071 REV. S 08.27.11 Copyright © 2000 EWC Controls Inc., All Rights Reserved.



SUBMITTAL SHEET

Model ND Rectangular Dampers with MA-ND5 Actuator

SIZING

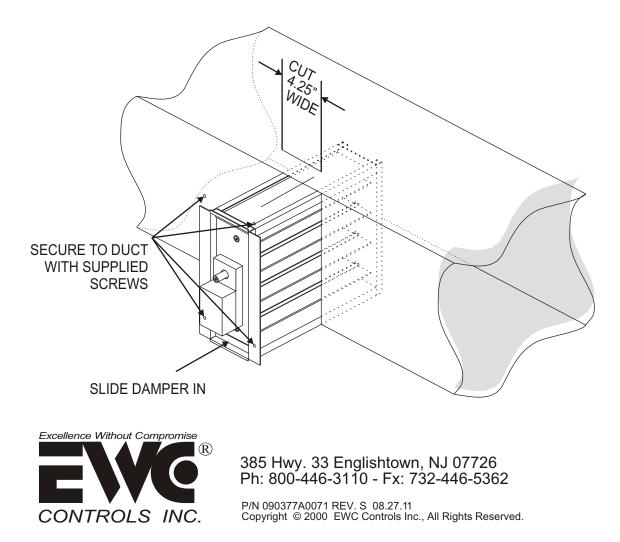
•ND Dampers are available in sizes 8" x 6" thru 30" x 30" in one inch increments.

• 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.

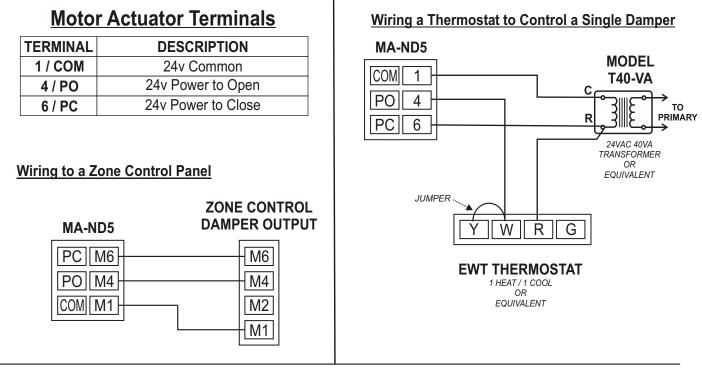




SUBMITTAL SHEET

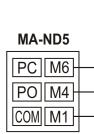
Model ND Rectangular Dampers with MA-ND5 Actuator

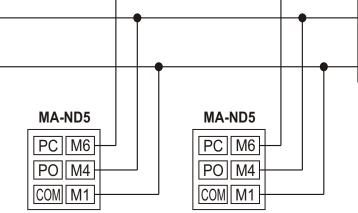
WIRING SOLUTIONS



Wiring in Parallel

ZONE CONTROL DAMPER OUTPUT







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

P/N 090377A0071 REV. S 08.27.11 Copyright © 2000 EWC Controls Inc., All Rights Reserved.



Model ND Rectangular Net Free area & CFM

SUBMITTAL SHEET

Model ND Rectangular Dampers with MA-ND5 Actuator

	10 12 28.08 34.84 28.08 34.84 28.08 34.84 28.08 34.84 190 220 41.11 51 270 350 271 54.14 54.14 67.16 360 450 67.16 83.32 450 550 80.19 99.48 80.19 99.48 80.19 99.48 630 780 630 780 106.24 131.8 106.24 131.8 106.24 131.8 720 930	14 41.6 260 260 60.89 390 80.19 540 540 99.48 690 690 118.77 118.77 118.77 118.77 118.77 118.77	16 48.35 48.35 340 70.78 70.78 93.21 630 630 115.64 115.64 138.07 910 1120 1120	18 55.11 360 360 80.67 510 510 106.24 106.24 131.8 930 930 157.36 1070 1070 1280	20 63.74 63.74 410 93.3 630 630 630 122.86 850 850 122.42 152.42 1080 181.98 181.98 181.98 1360 211.55	22 70.49 70.49 450 103.19 730 730 730 920 920 920 1150 201.28 1490 233.97	24 77.25 480 113.08 750 148.91 1040 184.74 184.74 1340 1340 1320.57	26 84.01 540 540 122.97 820 122.97 122.97 122.97 1110 1110 1110 1110 239.86 239.86 1680	28 90.76 560 560 132.86 840 174.96 174.96 174.96 1730 217.06 1530 259.16 1790 301.25	30 99.39 600 145.49 950 191.58 191.58 1300 237.68 1690 283.78 283.78 283.78 283.78
Free Area (Sq. In. 19.46 CFM 150 Free Area (Sq. In. 28.49 Free Area (Sq. In. 28.49 Free Area (Sq. In. 37.51 Free Area (Sq. In. 37.51 Free Area (Sq. In. 37.51 Free Area (Sq. In. 46.54 Free Area (Sq. In. 55.56 Free Area (Sq. In. 64.59 Free Area (Sq. In. 73.62 Free Area (Sq. In. 82.64 Free Area (Sq. In. 82.64 Free Area (Sq. In. 91.67 Free Area (Sq. In.		41.6 260 60.89 390 80.19 540 540 99.48 690 690 118.77 118.77 138.07 910	48.35 340 70.78 470 93.21 630 630 630 630 115.64 115.64 115.64 115.64 115.64 115.64 1120	55.11 360 80.67 510 510 106.24 106.24 120 131.8 930 930 157.36 1070 1280	63.74 63.74 410 93.3 630 630 122.86 850 850 122.42 152.42 1080 181.98 181.98 181.98 1360 211.55	70.49 450 103.19 730 135.88 920 920 168.58 168.58 168.58 1150 201.28 201.28 233.97	77.25 480 113.08 750 148.91 1040 184.74 1340 1340 1320.57 1620	84.01 540 122.97 820 161.93 1110 1110 1110 200.9 239.86 239.86 1680	90.76 560 132.86 840 174.96 174.96 174.96 1730 217.06 1530 259.16 1790 301.25	99.39 600 145.49 950 191.58 191.58 1300 237.68 1690 283.78 283.78 283.78 2160
CFM 150 Free Area (Sq. In) 28.49 Free Area (Sq. In) 28.49 Free Area (Sq. In) 37.51 Free Area (Sq. In) 37.51 Free Area (Sq. In) 250 Free Area (Sq. In) 250 Free Area (Sq. In) 46.54 Free Area (Sq. In) 55.56 Free Area (Sq. In) 55.56 Free Area (Sq. In) 55.56 Free Area (Sq. In) 64.59 Free Area (Sq. In) 82.64 Free Area (Sq. In) 81.67 Free Area (Sq. In) 91.67 Free Area (Sq. In) 91.67 Free Area (Sq. In) 530 Free Area (Sq. In) 91.67 Free Area (Sq. In) 91.67 Free Area (Sq. In) 91.67 Free Area (Sq. In) 91.67 Free Area (Sq. In) 5		260 60.89 390 80.19 540 540 540 690 690 118.77 118.77 138.07 910	340 70.78 470 93.21 630 630 630 630 115.64 115.64 115.64 1138.07 910 910 1120	360 80.67 510 720 106.24 131.8 930 930 157.36 1070 182.92 1280	410 93.3 630 630 850 850 850 122.86 850 122.42 1080 181.98 181.98 1360 211.55 211.55	450 103.19 730 920 920 168.58 168.58 168.58 1150 201.28 1490 233.97	480 113.08 750 148.91 1040 184.74 184.74 1340 220.57 1620	540 122.97 820 161.93 1110 1110 200.9 239.86 1680 1680	560 132.86 840 174.96 174.96 1730 1530 1530 259.16 1790 301.25	600 145.49 950 191.58 1300 237.68 1690 283.78 283.78 283.78 2160
Free Area (Sq. In. 28.49 CFM 180 Free Area (Sq. In.) 37.51 Free Area (Sq. In.) 250 Free Area (Sq. In.) 46.54 Free Area (Sq. In.) 55.56 Free Area (Sq. In.) 64.59 Free Area (Sq. In.) 73.62 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 530 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 530 Free Area (Sq. In.) 530 Free Area (Sq. In.) 500		60.89 390 80.19 540 99.48 690 690 118.77 820 820 910	70.78 470 93.21 630 630 630 115.64 115.64 1138.07 910 1120	80.67 510 106.24 720 131.8 930 930 157.36 1070 182.92 1280	93.3 630 122.86 850 152.42 152.42 1080 181.98 181.98 1360 211.55 211.55	103.19 730 135.88 920 168.58 168.58 168.58 201.28 201.28 1490 233.97	113.08 750 148.91 1040 184.74 1340 1340 220.57 1620	122.97 820 161.93 1110 200.9 1410 239.86 1680	132.86 840 174.96 1180 217.06 1530 1530 259.16 1790 301.25	145.49 950 191.58 1300 237.68 1690 283.78 283.78 2160
CFM 180 Free Area (Sq. In.) 37.51 Free Area (Sq. In.) 250 Free Area (Sq. In.) 46.54 Free Area (Sq. In.) 55.56 Free Area (Sq. In.) 55.56 Free Area (Sq. In.) 55.56 Free Area (Sq. In.) 64.59 Free Area (Sq. In.) 64.59 Free Area (Sq. In.) 64.59 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 81.67		390 80.19 540 99.48 690 690 118.77 138.07 910	470 93.21 630 115.64 115.64 780 780 780 1138.07 910 1120	510 106.24 720 131.8 930 157.36 157.36 1070 182.92 1280	630 122.86 850 152.42 1080 181.98 181.98 181.98 1360 211.55	730 135.88 920 168.58 1150 201.28 1490 233.97	750 148.91 1040 184.74 1340 220.57 1620	820 161.93 1110 200.9 1410 239.86 1680	840 174.96 1180 217.06 1530 1530 259.16 1790 301.25	950 191.58 1300 237.68 1690 283.78 283.78 2160
Free Area (Sq. In. 37.51 CFM 250 Free Area (Sq. In. 46.54 Free Area (Sq. In. 55.56 Free Area (Sq. In. 55.56 Free Area (Sq. In. 55.56 Free Area (Sq. In. 64.59 Free Area (Sq. In. 64.50 Free Area (Sq. In. 64.50 Free Area (Sq. In. 82.64 Free Area (Sq. In. 91.67 Free Area (Sq. In. 63.0 Free Area (Sq. In. 91.67 Free Area (Sq. In. 61.07 Free Area (Sq. In. 61.07		80.19 540 99.48 690 118.77 118.77 820 820 138.07 910	93.21 630 115.64 115.64 780 780 138.07 910 160.49 1120	106.24 720 131.8 930 157.36 1070 182.92 1280	122.86 850 152.42 1080 181.98 181.98 181.98 211.55 211.55	135.88 920 168.58 1150 201.28 1490 233.97	148.91 1040 184.74 1340 220.57 1620	161.93 1110 200.9 1410 239.86 1680	174.96 1180 217.06 1530 259.16 1790 301.25	191.58 1300 237.68 1690 283.78 283.78 2160
CFM 250 Free Area (Sq. In) 46.54 Free Area (Sq. In) 55.56 Free Area (Sq. In) 55.56 Free Area (Sq. In) 55.56 Free Area (Sq. In) 64.59 Free Area (Sq. In) 64.59 Free Area (Sq. In) 64.59 Free Area (Sq. In) 64.50 Free Area (Sq. In) 82.64 Free Area (Sq. In) 91.67 Free Area (Sq. In) 530 Free Area (Sq. In) 91.67 Free Area (Sq. In) 530 Free Area (Sq. In) 530		540 99.48 690 118.77 820 820 910	630 115.64 780 138.07 910 1120	720 131.8 930 157.36 1070 182.92 1280	850 152.42 1080 181.98 1360 211.55 211.55	920 168.58 1150 201.28 1490 233.97	1040 184.74 1340 220.57 1620	1110 200.9 1410 239.86 1680	1180 217.06 1530 259.16 1790 301.25	1300 237.68 1690 283.78 2160
Free Area (Sq. In.) 46.54 CFM 310 Free Area (Sq. In.) 55.56 Free Area (Sq. In.) 55.56 Free Area (Sq. In.) 64.59 Free Area (Sq. In.) 73.62 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 81.67 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 530 Free Area (Sq. In.) 530 Free Area (Sq. In.) 530		99.48 690 118.77 820 138.07 910	115.64 780 138.07 910 160.49 1120	131.8 930 157.36 1070 182.92 1280	152.42 1080 181.98 1360 211.55 211.55	168.58 1150 201.28 1490 233.97	184.74 1340 220.57 1620	200.9 1410 239.86 1680	217.06 1530 259.16 1790 301.25	237.68 1690 283.78 2160
CFM 310 Free Area (Sq. In.) 55.56 Free Area (Sq. In.) 55.56 Free Area (Sq. In.) 64.59 Free Area (Sq. In.) 64.59 Free Area (Sq. In.) 73.62 Free Area (Sq. In.) 73.62 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 530 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 61.67 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 63.0 Free Area (Sq. In.) 700.69 Free Area (Sq. In.) 700.69		690 118.77 820 138.07 910	780 138.07 910 160.49 1120	930 157.36 1070 182.92 1280	1080 181.98 1360 211.55 1610	1150 201.28 1490 233.97	1340 220.57 1620	1410 239.86 1680	1530 259.16 1790 301.25	1690 283.78 2160
Free Area (Sq. In.) 55.56 CFM 340 Free Area (Sq. In.) 64.59 Free Area (Sq. In.) 73.62 Free Area (Sq. In.) 73.62 Free Area (Sq. In.) 73.62 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 67.0 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 700.69 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 700.69		118.77 820 138.07 910	138.07 910 160.49 1120	157.36 1070 182.92 1280	181.98 1360 211.55 1610	201.28 1490 233.97	220.57 1620	239.86 1680	259.16 1790 301.25	283.78 2160
CFM 340 Free Area (Sq. In) 64.59 Free Area (Sq. In) 64.59 Free Area (Sq. In) 73.62 Free Area (Sq. In) 73.62 Free Area (Sq. In) 73.62 Free Area (Sq. In) 82.64 Free Area (Sq. In) 91.67 Free Area (Sq. In) 91.67 Free Area (Sq. In) 91.67 Free Area (Sq. In) 100.69 Free Area (Sq. In) 530 Free Area (Sq. In) 610.67		820 138.07 910	910 160.49 1120	1070 182.92 1280	1360 211.55 1610	1490 233.97	1620	1680	1790 301.25	2160
Free Area (Sq. In.) 64.59 CFM 64.59 Free Area (Sq. In.) 73.62 Free Area (Sq. In.) 73.62 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 81.67 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 100.69 Free Area (Sq. In.) 530 Free Area (Sq. In.) 700.69 Free Area (Sq. In.) 700.69		138.07 910	160.49 1120	182.92 1280	211.55 1610	233.97		00 020	301.25	
CFM 400 Free Area (Sq. In.) 73.62 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 530 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 100.69 Free Area (Sq. In.) 530 Free Area (Sq. In.) 500		910	1120	1280	1610		256.4	2/8.83		329.88
Free Area (Sq. In.) 73.62 CFM 420 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 100.69 Free Area (Sq. In.) 100.69 Free Area (Sq. In.) 700.69		117 00				1740	1860	2040	2300	2590
CFM 420 Free Area (Sq. In.) 82.64 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 100.69 Free Area (Sq. In.) 100.69 Free Area (Sq. In.) 500		0£./CL	182.92	208.48	241.11	266.67	292.23	317.79	343.35	375.98
Free Area (Sq. In.) 82.64 CFM 460 Free Area (Sq. In.) 91.67 Free Area (Sq. In.) 100.69 Free Area (Sq. In.) 100.69 Free Area (Sq. In.) 100.69 Free Area (Sq. In.) 500		1070	1280	1440	1790	2080	2200	2380	2480	3070
CFM 460 Free Area (Sq. In.) 91.67 CFM 530 Free Area (Sq. In.) 100.69 CFM 500	119.27 147.96	176.66	205.35	234.05	270.67	299.36	328.06	356.75	385.45	422.07
Free Area (Sq. In.) 91.67 CFM 530 Free Area (Sq. In.) 100.69 CFM 500	790 990	1240	1450	1590	2070	2250	2590	2770	2940	3360
CFM 530 Free Area (Sq. In.) 100.69 CFM 500	132.29 164.12	195.95	227.78	259.61	300.23	332.06	363.89	395.72	427.55	468.17
Free Area (Sq. In.) 100.69 CFM 500	880 1100	1340	1550	1840	2250	2580	2820	2970	3180	4220
CFM 500	145.32 180.28	215.24	250.21	285.17	329.79	364.76	399.72	434.68	469.65	514.27
	950 1210	1440	1640	1920	2590	2820	3030	3450	3670	4570
36 Free Area (Sq. In.) 109.72 158.34	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	1060 1260	1580	1900	2210	2770	3210	3450	3730	3910	5560
78 Free Area (Sq. In.) 118.75 171.37	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	1110 1440	1670	1980	2280	3170	3470	3670	3910	4890	6030
30 Free Area (Sq. In.) 127.77 184.4	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	1160 1490	1750	2050	2400	3360	3630	3860	4900	5220	6500