



YOUNG REGULATOR CO.

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Submit EBD – 01-08

MODEL EBD

ELECTRONIC BALANCING DAMPER
With POSITION FEEDBACK
12V DC

STANDARD CONSTRUCTION	
Shell	20 ga. galvanized steel
Blade	20 ga. galvanized steel
Shaft	1/2" plated steel
Bushing	Oil impregnated bronze
SIZE INFORMATION	
One end straight, one end crimped Rolled stiffening beads	
Diameter	4" – 16"
Shell Length	8"
ACTUATOR	
Volts	12V DC
Watts	< 0.5
Amp	< 20 mA.
Timing	12 sec 90° rotation
Position Feedback	Via proportional voltage signal
Torque	16 lbs-in (max)
ACCESSORIES	
REQUIRED	TERMINATION OPTIONS
EBDP – Positioner One per order	TP-301 Concealed Ceiling Termination
EBDC – Plenum Rated Cable One per assembly	TP-WALL (1-6 ports)
OTHER	
High Efficiency Takeoff version	Rectangular Dampers
Low leak seals	Spare batteries
OPTIONS	
Optional model is available without position indication (YR Model DCD)	

APPLICATION AND DESIGN

The Young Regulator EBD is an Electronic Balancing Damper. Dampers above a hard ceiling or in any inaccessible location can be controlled with the EBDP – Electronic Balancing Damper Positioner, which opens and closes the damper and provides a visual indication of the damper position with an LCD meter.

The Positioner is used to control any number of dampers that are at a worksite through a variety of receptacles that are offered. The Positioner is self contained and small enough to be carried in a pocket. A high capacity lithium battery is featured for long life and is easily replaced in the field when necessary.

The EBD is ideal in a number of applications:

- Labs, where more precise balancing or control may be required
- Schools, prisons, and mental health facilities, where access to controls is restricted
- Atriums, where dampers are inaccessible and long cable runs are required
- Any situation where seasonal changes require re-balancing of the HVAC system

An EBD, Electronic Balancing Damper includes the 12V DC motor. An EBDC Cable up to 1,000' in length, and possibly a termination are required for a complete assembly. Field connection between 12V DC motor and termination is fast and simple with snap on connectors installed by the factory. Also, one EBDP Positioner is required per job.



RECOMMENDED ELECTRONIC BALANCING DAMPER SPECIFICATIONS

To provide a means of balancing airflow in ductwork above inaccessible ceilings, the contractor shall furnish the model **EBD remote balancing damper assembly with a visual damper position indication meter manufactured by Young Regulator.**

The Young Regulator EBD Remote Damper Assembly consists of a commercial quality damper actuated by a 12V DC motor with position feedback, a plenum rated cable with RJ-25 connectors, termination options to control the damper from a plenum, wall or ceiling, and a hand held positioner that provides DC voltage to open and close the damper while displaying the damper position with the LCD position indicator meter.

The damper shall be either the model EBD round, rectangular or High Efficiency Takeoff damper. EBD round is 20 ga. galvanized steel shell and blade with 1/2" plated steel damper shafts, and the 12V DC Motor with position feedback. The model EBDR Rectangular is 20 ga. aluminum frame and blade, stainless steel slide, 18 gauge galvanized steel mounting plate for slip in installation, and the 12V DC motor with position feedback. The model EBD-HET is a high efficiency, galvanized steel takeoff with 20 ga. blade and 1/2" steel shafts, and the 12V DC motor with position feedback.

The EBDC Cable is a plenum rated cable with modular connectors, available in lengths to 1000'. One modular connector is attached to the motor and the other end is a RJ-25 modular connector that is installed inside a plenum or into a wall or ceiling receptacle, to be determined by architectural drawings.

The EBDP Positioner uses a modular RJ-25 connector that plugs into the modular connector from the 12V DC motor. It houses a high capacity replaceable lithium battery that drives the motor open and closed. The positioner also houses the LCD display that provides precise damper position indication throughout the range of movement via a proportional voltage feedback signal from the motor.

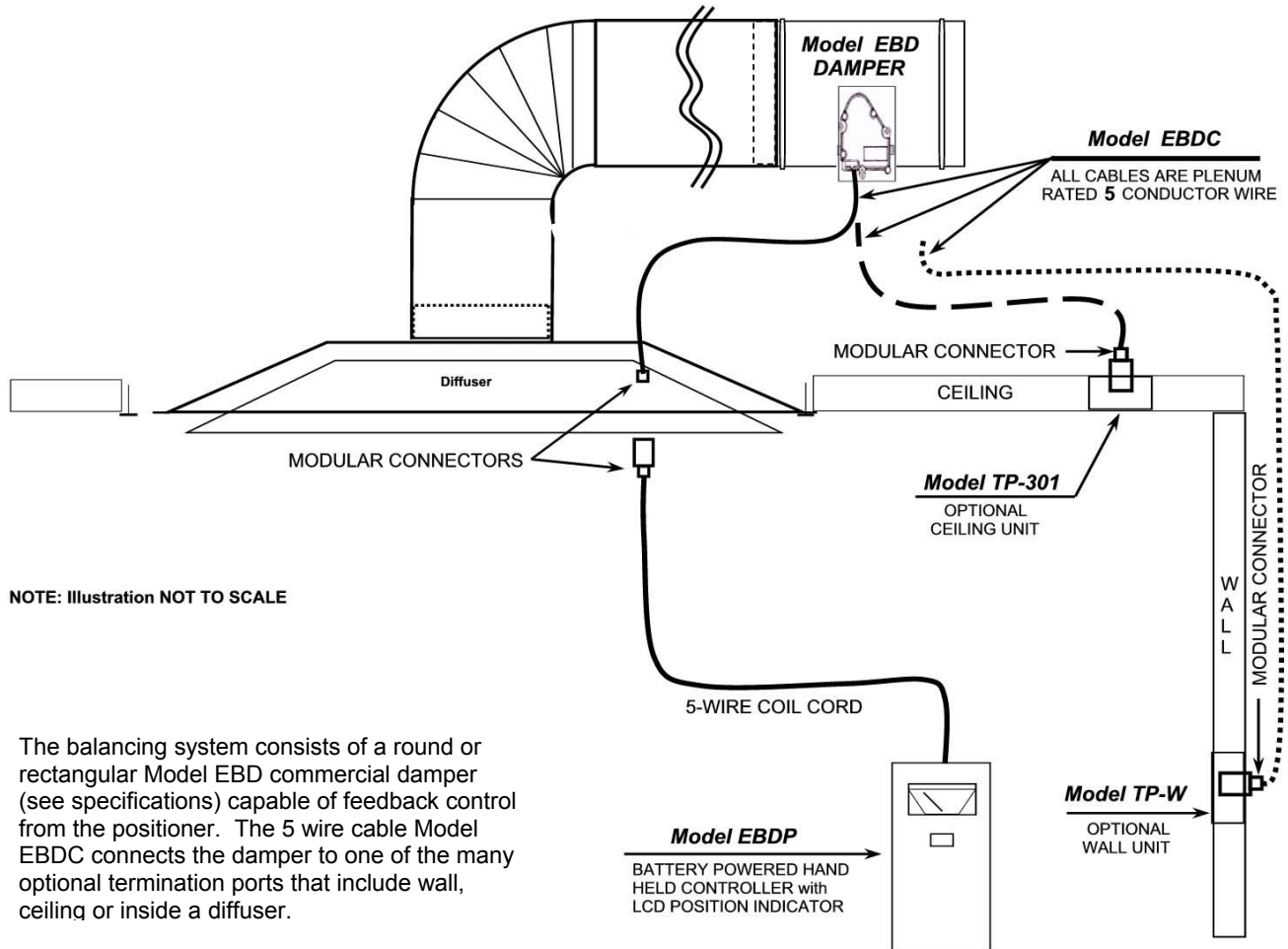
QUANTITY	DIAMETER	
PROJECT		LOCATION
CONTRACTOR		DESIGN SPECIFIER



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EBD-02- 07-08

**MODEL EBD
 ELECTRONIC BALANCING DAMPER
 OPERATIONAL OVERVIEW**



NOTE: Illustration NOT TO SCALE

The balancing system consists of a round or rectangular Model EBD commercial damper (see specifications) capable of feedback control from the positioner. The 5 wire cable Model EBDC connects the damper to one of the many optional termination ports that include wall, ceiling or inside a diffuser.

The Model EBDP positioner is a handheld, battery operated controller capable of operating dampers at specific ranges between 0 and 100% open (fully closed to fully open).

NOTE: See individual catalogue pages for features and recommended specifications

Operation:

The Positioner is turned on via a side-mounted switch that enables the meter to indicate damper position. A non-rechargeable 9v lithium battery powers the Positioner.

Once the unit is connected to a receptacle, the meter indicates blade position operating over a range of 0 – 100% open via a voltage signal that is proportional to the blade angle.

The position of the damper blade is controlled by the use of a front mounted rocker switch, opening the damper by depressing the right side of the switch and closing the damper by depressing the left side of the switch. The meter indicates the exact position of the damper blade. The switch will return to the neutral center position when released.

When finished adjusting dampers at the worksite, be sure to turn the Positioner off with the slide switch to extend battery life. Positioner should be returned to the owner.

Replace the battery in the positioner with the same type of battery to maintain the calibration of the position meter. Replacement batteries are available from Young Regulator Co and many retail outlets. Dispose of used batteries in accordance with local regulatory and environmental codes.