Hagan 2-1/2 x 5

Thrust Type, Swivel Mounted
Pneumatic Power Positioner

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SECTION 1
DESCRIPTION

1-1 SCOPE

This manual gives information needed to install, operate, maintain and service all models of the Hagan 2-1/2 Inch x 5 Inch Thrust Type, Swivel Mounted Power Positioner.

1-2 PACKAGE CONTENTS

The power positioner comes completely assembled and carefully packaged to prevent damage in shipping. Inspect the packaging before removing the unit, and report any damage to the shipping agent.

Carefully pull the unit lengthwise out of the box. Find the packing list that is included in each shipment. Check the items received against the packing list to verify that the shipment is complete and correct. Make sure that the signal range stamped on the pilot valve is the one the packing list calls for. If a pivot base has been ordered, make sure it is attached to the unit. Check all items for damage.

1-3 EQUIPMENT DESCRIPTION

a. Purpose

The Hagan Power Positioner is typically used to position the damper of a large volume boiler. To do this, the power positioner connects to a lever on the damper jackshaft. The jackshaft connects to the damper. When the power positioner moves, the lever moves the jackshaft, which moves the damper.

b. Operation

There are two types of power positioners available: the standard variable position pilot valve type, and the on/off standard option with a solenoid valve. Both use the same power components. In both types, power air pressure moves a piston in a cylinder. When air flow goes to the bottom of the cylinder the piston moves upward. When air flow goes to the top of the cylinder, the piston moves downward. As the piston travels, a clevis (attached to the piston rod) moves the damper lever.

The difference between the two positioner types is in the control power air system.

1. The Standard Power Positioner, Figure 1-1, uses a variable, low pressure control air circuit and a pilot valve assembly to control the single pressure power air. The higher the control air pressure, the farther the piston extends. With this type of equipment, boiler controls can move the power positioner to any point along its five inch stroke.

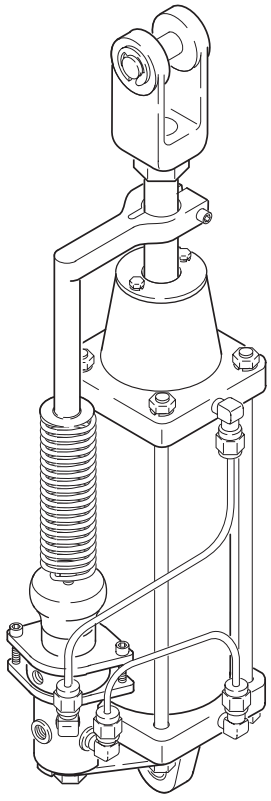

Figure 1-1. Standard 2-1/2 Inch x 5 Inch Power Positioner (Variable Position Pilot Valve Type)