
FLUID CONTROLS INSTITUTE

REGULATOR TERMINOLOGY

FCI 86-2-2000

Fluid Controls Institute, Inc.

Sponsor:



Fluid Controls Institute, Inc.
1300 Sumner Ave
Cleveland, Ohio 44115-2851

FLUID CONTROLS INSTITUTE STANDARD Regulator Terminology

Sponsor

Fluid Controls Institute, Inc.

The Fluid Controls Institute is a non-profit trade association of manufacturers of fluid control and conditioning equipment. The FCI is dedicated to the technical advancement of the industry that it serves. The members of the institute have developed standards to help users/purchasers understand and specify correctly Fluid Controls Institute scope products. FCI standards are voluntary standards, and their existence does not in any respect preclude anyone, whether he has approved the standard or not, from manufacturing, marketing, purchasing or using products, processes, or procedures not conforming to the standards. Fluid Controls Institute standards are subject to periodic review and users are cautioned to obtain the latest editions.

CAUTION NOTICE:

This Fluid Controls Institute standard may be revised or withdrawn at any time. The procedures of the Fluid Controls Institute require that action be taken to reaffirm, revise, or withdraw this standard no later than five years from the date of publication. Purchasers of FCI standards may receive current information on all standards by calling or writing the Fluid Controls Institute.

Sponsored and published by:
FLUID CONTROLS INSTITUTE, INC.
1300 Sumner Avenue
Cleveland, OH 44115-2851
Phn: 216/241-7333
Fax: 216/241-0105
E-Mail: fci@fluidcontrolsinstitute.org
URL: www.fluidcontrolsinstitute.org

Copyright © 2000 by Fluid Controls Institute, Inc.
All Rights Reserved

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.

Suggestions for improvement of this standard will be welcome. They should be sent to the Fluid Controls Institute, Inc.

Printed in the United States of America

Foreword	vi
1. Introduction	1
2. Scope	1
3. Basic Definition	1
4. Types of Regulators	1-7
5. Functional Characteristics	8
6. Performance Characteristics	9-10
7. Part Terminology	10-18
8. Design Features	19
9. Glossary of Non-Standard Terms	19
10. References	19-20

Copyright Fluid Controls Institute Inc.

Foreword

(This foreword is included for information only and is not part of FCI 86-2-2000, *Regulator Terminology*.)

This voluntary standard has been developed by the Regulator Section of the Fluid Controls Institute to establish common and preferred terminology for regulators. This standard addresses the following major areas: types of regulators, functional characteristics, performance characteristics, part terminology, and design features.

This standard incorporates information previously contained in FCI 55-1, 58-1, 70-1, and 71-1. An attempt has also been made to utilize existing terminology contained in publications of recognized technical or trade associations.

The following types of devices are excluded from the standard:

- Safety Valves
- Safety Relief Valves
- Level Regulators
- Regulators for Fuel Gases

FCI recognizes the need to periodically review and update this standard. Suggestions for improvement should be forwarded to the Fluid Controls Institute, Inc., 1300 Sumner Avenue, Cleveland, Ohio 44115-2851. All constructive suggestions for expansion and revision of this standard are welcome.

The existence of a Fluid Controls Institute (FCI) standard does not in any respect preclude any member or non-member from manufacturing or selling products not conforming to this standard nor is the FCI responsible for its use.

FLUID CONTROLS INSTITUTE

Regulator Terminology

1 INTRODUCTION

The terminology in this standard is intended to establish a common and preferred usage of terms as they apply to regulators. Many of the terms are identical to, or have direct counterparts with, control valve terminology. ISA-S75.05 "Control Valve Terminology" has been used as a reference.

2 SCOPE

To provide basic regulator definitions and terminology relating to types, function, performance, parts, and design features.

3 BASIC DEFINITION

Regulator -- A self-contained valve with operator operated by the flowing fluid or by the process energy from a directly connected sensing device.

4 TYPES OF REGULATORS

4.1 Flow Regulator -- A self-operated device which maintains a constant rate of fluid flow while compensating for system pressure changes. See Fig. 1.

4.2 Pressure Regulator

A self-operated device, either pilot or direct operated, in which power to position the valve plug is provided by the pressure of the controlled variable. See Fig. 2.

4.2.1 Absolute Pressure Regulator -- A regulator that uses absolute pressure rather than atmospheric pressure as a reference.

4.2.2 Back Pressure Regulator/Relief Regulator -- A device that controls and responds to changes in its inlet pressure.

4.2.3 Booster Relay -- A ratio pressure relay that provides a higher flow volume output than the signal source to which it responds.

4.2.4 Computing Relay -- A form of regulator that generates an output signal in a defined mathematical relationship to an externally applied signal or signals.

4.2.5 Differential Pressure Regulator -- A device that maintains a constant differential pressure between a reference pressure and the pressure of the controlled fluid.

4.2.6 Pressure Reducing Regulator -- A device that controls and responds to changes in its outlet pressure.

4.2.7 Pump Pressure Regulator -- A device that controls the speed of a pump in response to changes in pump discharge pressure.

4.2.8 Ratio Relay -- See 4.2.4. A form of computing relay which generates an output signal in a fixed ratio to the input signal.

4.2.9 Vacuum Regulator/Breaker -- A device that controls pressure less than atmospheric pressure.

Flow Regulator

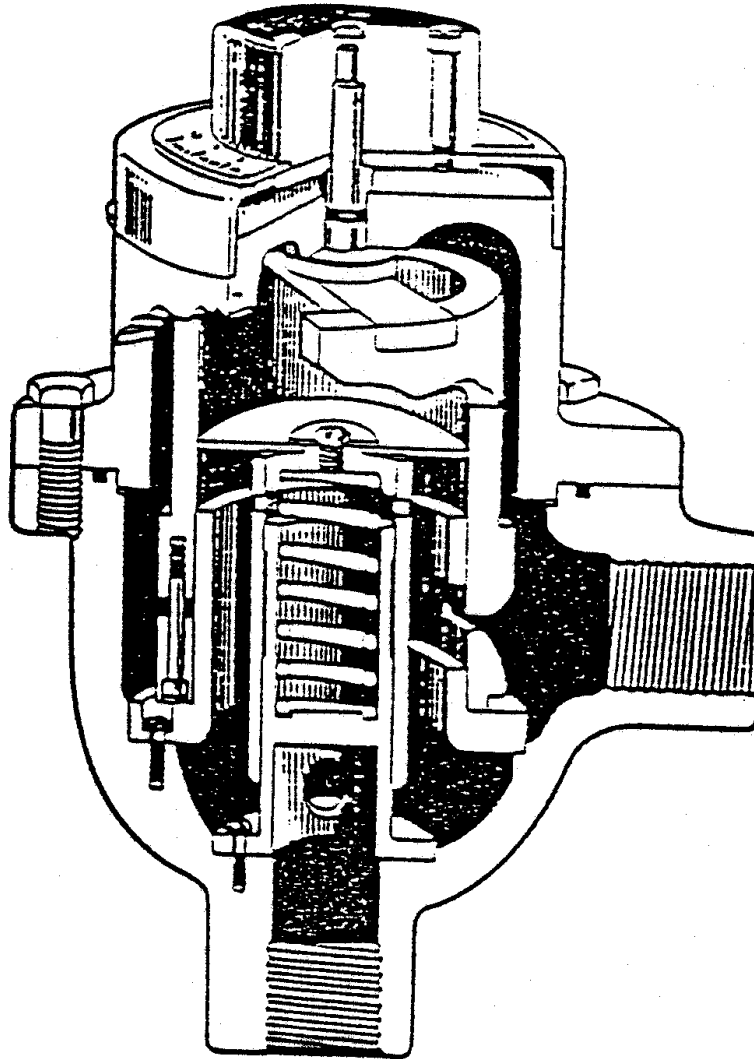


Figure 1

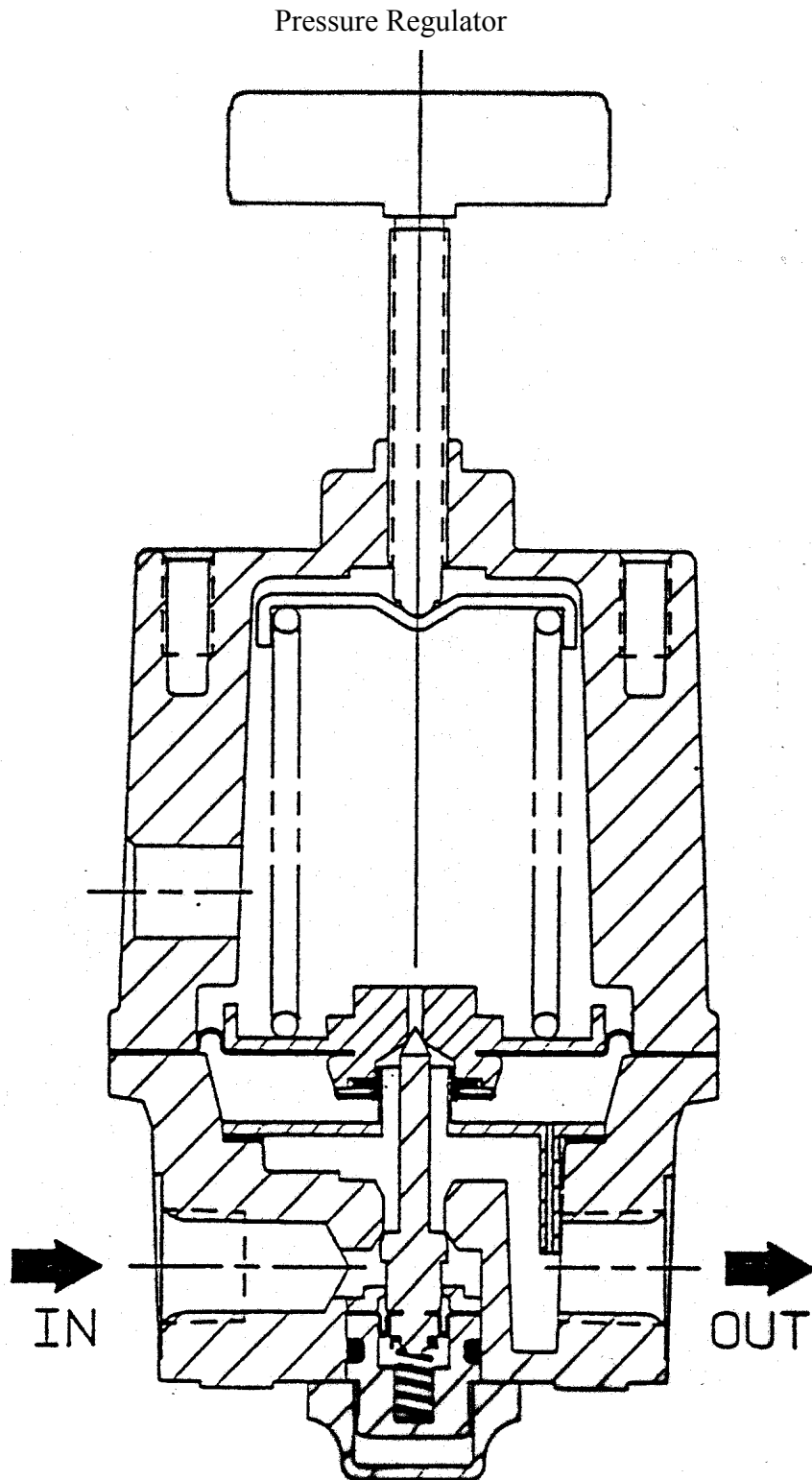


Figure 2