American National Standard for

Controlled-Volume Metering Pumps

for Nomenclature, Definitions, Application, and Operation

ANSI/HI 7.1–7.5-2013

Hydraulic INSTITUTE

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Parsippany, New Jersey
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Sponsor
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Approved August 12, 2013
American National Standards Institute, Inc.

American National Standard

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Published By

Hydraulic Institute, Inc.
6 Campus Drive, First Floor North
Parsippany, NJ 07054-4406

www.Pumps.org

Printed in the United States of America

ISBN 978-1-935762-09-6

Recycled paper

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Foreword (Not part of Standard)

Purpose and aims of the Hydraulic Institute

The purpose and aims of the Institute are to promote the continued growth and well-being of pump users and pump manufacturers and further the interests of the public in such matters as are involved in manufacturing, engineering, distribution, safety, transportation, and other problems of the industry, and to this end, among other things:

a) To develop and publish standards for pumps;

b) To collect and disseminate information of value to its members and to the public;

c) To appear for its members before governmental departments and agencies and other bodies in regard to matters affecting the industry;

d) To increase the amount and to improve the quality of pump service to the public;

e) To support educational and research activities;

f) To promote the business interests of its members but not to engage in business of the kind ordinarily carried on for profit or to perform particular services for its members or individual persons as distinguished from activities to improve the business conditions and lawful interests of all of its members.

Purpose of Standards

1) Hydraulic Institute Standards are adopted in the public interest and are designed to help eliminate misunderstandings between the manufacturer, the purchaser and/or the user and to assist the purchaser, in selecting and obtaining the proper product for a particular need.

2) Use of Hydraulic Institute Standards is completely voluntary. Existence of Hydraulic Institute Standards does not in any respect preclude a member from manufacturing or selling products not conforming to the Standards.

Definition of a Standard of the Hydraulic Institute

Quoting from Article XV, Standards, of the By-Laws of the Institute, Section B:

“An Institute Standard defines the product, material, process or procedure with reference to one or more of the following: nomenclature, composition, construction, dimensions, tolerances, safety, operating characteristics, performance, quality, rating, testing, and service for which designed.”

Comments from users

Comments from users of this standard will be appreciated, to help the Hydraulic Institute prepare even more useful future editions. Questions arising from the content of this standard may be sent to the Technical Director of the Hydraulic Institute. The inquiry will then be directed to the appropriate technical committee for provision of a suitable answer.

If a dispute arises regarding contents of an Institute Standard or an answer provided by the Institute to a question such as indicated above, the point in question shall be sent in writing to the Technical Director of the Hydraulic Institute, who shall initiate the appeals process.

Revisions

The standards of the Hydraulic Institute are subject to constant review, and revisions are undertaken whenever it is found necessary because of new developments and progress in the art. If no revisions are made for five years, the standards are reaffirmed using the ANSI canvass procedure.

Scope

This standard is for controlled-volume metering pumps, which are reciprocating power pumps used to accurately displace a predetermined volume of liquid in a specified time period. It includes types and nomenclature;

definitions; design and application; and installation, operation, and maintenance. This standard does not apply to accessory items, such as piping, tubing, fittings, or instrumentation or pump drivers.

Units of measurement

Metric units of measurement are predominantly used, and, where appropriate, US customary equivalents appear in brackets following the metric units. Charts, graphs, and sample calculations are shown in both metric and US units.

Consensus for this standard was achieved by use of the canvass method

The following organizations, recognized as having an interest in the standardization of controlled-volume metering pumps, were contacted prior to the approval of this standard. Inclusion in this list does not necessarily imply that the organization concurred with the submittal of the proposed standard to ANSI.

ARCADIS
Colfax Fluid Handling
Kemet Inc.
MWH Americas, Inc.
Neptune Chemical Pump Co., Inc.

Working group committee members

Although this standard was processed and approved for submittal to ANSI by the canvass method, the committee met many times to facilitate its development. At the time it was developed, the committee had the following members:

Chair – Don Weidemann, Neptune Chemical Pump Co., Inc
Vice-chair – James Casey, Milton Roy Americas

Committee Members	**Company**
Gary Cornell	Blacoh Fluid Controls, Inc.
Aaron Hinchliffe	Iwaki America Incorporated
Doug Purdy	Wanner Engineering, Inc.
Peter Timpanelli	LEWA, Inc.
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Joel Higbee	Milton Roy Americas
Dennis Ruis	Iwaki America Incorporated