Check Valves: Flanged, Lug, Wafer, and Butt-welding

API STANDARD 594
NINTH EDITION, FEBRUARY 2022

API MONOGRAM PROGRAM EFFECTIVE DATE: AUGUST 2022

currently in preview, click buy full versi

Special Notes

API publications necessarily address problems of a general nature. With respect to particular circumstances, local, state, and federal laws and regulations should be reviewed. The use of API publications is voluntary. In some cases, third parties or authorities having jurisdiction may choose to incorporate API standards by reference and may mandate compliance.

Neither API nor any of API's employees, subcontractors, consultants, committees, or other assignees make any warranty or representation, either express or implied, with respect to the accuracy, completeness, or usefulness of the information contained herein, or assume any liability or responsibility for any use, or the results of such use, of any information or process disclosed in this publication. Neither API nor any of API's employees, subcontractors, consultants, or other assignees represent that use of this publication would not infringe upon privately owned rights.

API publications may be used by anyone desiring to do so. Every effort has been made by the Institute to assure the accuracy and reliability of the data contained in them; however, the Institute makes no representation, warranty, or guarantee in connection with this publication and hereby expressly disclaims any liability or responsibility for loss or damage resulting from its use or for the violation of any authorities having jurisdiction with which this publication may conflict.

API publications are published to facilitate the broad availability of proven, sound engineering and operating practices. These publications are not intended to obviate the need for applying sound engineering judgment regarding when and where these publications should be used. The formulation and publication of API publications is not intended in any way to inhibit anyone from using any other practices.

Any manufacturer marking equipment or materials in conformance with the marking requirements of an API standard is solely responsible for complying with all the applicable requirements of that standard. API does not represent, warrant, or guarantee that such products do in fact conform to the applicable API standard.

Users of this standard should not rely exclusively on the information contained in this document. Sound business, scientific, engineering, and safety judgment should be used in employing the information contained herein.

Currently in preview, click buy for full version

All rights reserved. No part of this work may be reproduced, translated, stored in a retrieval system, or transmitted by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission from the publisher. Contact the Publisher, API Publishing Services, 200 Massachusetts Avenue, NW, Suite 1100, Washington, DC 20001-5571.

Copyright © 2022 American Petroleum Institute

Foreword

Nothing contained in any API publication is to be construed as granting any right, by implication or otherwise, for the manufacture, sale, or use of any method, apparatus, or product covered by letters patent. Neither should anything contained in the publication be construed as insuring anyone against liability for infringement of letters patent.

The verbal forms used to express the provisions in this document are as follows.

Shall: As used in a standard, "shall" denotes a minimum requirement to conform to the standard.

Should: As used in a standard, "should" denotes a recommendation or that which is advised but not required to conform to the standard.

May: As used in a standard, "may" denotes a course of action permissible within the limits of a standard.

Can: As used in a standard, "can" denotes a statement of possibility or capability.

This document was produced under API standardization procedures that ensure appropriate notification and participation in the developmental process and is designated as an API standard. Questions concerning the interpretation of the content of this publication or comments and questions concerning the procedures under which this publication was developed should be directed in writing to the Director of Standards, American Petroleum Institute, 200 Massachusetts Avenue, Suite 1100, Washington, DC 20001. Requests for permission to reproduce or translate all or any part of the material published herein should also be addressed to the director.

Generally, API standards are reviewed and revised, reaffirmed, or withdrawn at least every five years. A one-time extension of up to two years may be added to this review cycle. Status of the publication can be ascertained from the API Standards Department, telephone (202) 682-8000. A catalog of API publications and materials is published annually by API, 200 Massachusetts Avenue, Suite 1100, Washington, DC 20001.

Suggested revisions are invited and should be submitted to the Standards Department, API, 200 Massachusetts Avenue, Suite 1100, Washington, DC 20001, standards@api.org.

currently in preview, click buy full versi

currently in preview, click buy full versi

Contents

currently in preview, click buy full versi

Contents

currently in preview, click buy full versi

Check Valves: Flanged, Lug, Wafer, and Butt-welding

1 Scope

This standard covers the design, materials, face-to-face dimensions, pressure-temperature ratings, inspection, examination, and testing requirements for two types of check valves.

Type “A” check valves have short face-to-face dimensions per this standard.

— The body pattern may be wafer, wafer with lugs, or double flanged.

— The obturator may be single or dual plate, swing disc, or pivoting disc.

— Body materials include gray and ductile irons, and materials included in ASME B16.34.

— See typical illustrations in Annex C, Figures C.1, C.2, C.3, C.4, and C.5.

Type “B” check valves are long pattern or short pattern with face-to-face/end-to-end dimensions per ASME B16.10.

— The body may be flanged or have butt-welding ends.

— The obturator may be swing disc or pivoting disc.

— Body materials are included in ASME B16.34.

— See typical illustrations in Annex C, Figure C.5.

Other types of check valves, such as axial disc or body/stem guided disc (center spring type) valves, nozzle-type check valves, or lift-type check valves, are not included in this standard.

This standard covers valves of the nominal pipe size DN:

— 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1050, and 1200

corresponding to nominal pipe sizes NPS:

— 2, 2½, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, and 48.

Pressure class designations include:

— 150, 300, 600, 900, 1500, and 2500 per ASME B16.34;

— 125 and 250 per ASME B16.1;

— 150 and 300 per ASME B16.42.

Information to be specified by the purchaser is shown in Annex B.

The standard nomenclature for valve parts are identified in Figures C.1 through C.5 in Annex C. These figures show typical designs only and are not to be construed as precluding other available designs that conform to the requirements of this standard.

The construction of a valve is acceptable only if it conforms to this standard in all respects.

currently in preview, click buy full version