
**Steel gate, globe and check valves
for sizes DN 100 and smaller, for the
petroleum and natural gas industries**

*Robinets-vannes, robinets à soupape et clapets de non retour en acier
de dimensions DN 100 et inférieures, pour les industries du pétrole et
du gaz naturel*





COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	3
4 Pressure/temperature ratings	3
4.1 Valve ratings.....	3
4.2 Temperature constraints.....	4
5 Design	4
5.1 Reference design.....	4
5.2 Flow passageway.....	5
5.3 Wall thickness.....	6
5.4 Valve body.....	7
5.4.1 General.....	7
5.4.2 Socket welding ends.....	7
5.4.3 Threaded ends.....	8
5.4.4 Flanged ends.....	9
5.4.5 Butt-welding ends.....	10
5.4.6 Body seats.....	11
5.5 Valve bonnet or cover.....	11
5.6 Obturator.....	13
5.6.1 Seating surfaces.....	13
5.6.2 Gate valve obturators.....	13
5.6.3 Globe valve obturators.....	13
5.6.4 Check valve obturators.....	13
5.7 Stem.....	14
5.8 Stem nut or stem bushing.....	16
5.9 Packing, packing chamber, and gland.....	16
5.10 Packing retention.....	17
5.11 Handwheel.....	17
6 Materials	17
6.1 Trim materials.....	17
6.2 Materials other than trim.....	17
7 Marking	18
7.1 Legibility.....	18
7.2 Body marking.....	18
7.3 Ring joint groove marking.....	20
7.4 Identification plate marking.....	20
7.5 Weld fabrication marking.....	21
8 Testing and inspection	21
8.1 Pressure tests.....	21
8.1.1 General.....	21
8.1.2 Shell test.....	22
8.1.3 Closure leakage test.....	22
8.1.4 Optional closure leakage test for gate valves.....	23
8.1.5 Backseat leakage test.....	23
8.1.6 Fugitive emission testing.....	23
8.2 Inspection.....	24
9 Preparation for despatch	24
Annex A (normative) Requirements for extended body gate valve bodies	25