

# Revision Notes for 16D 3rd Ed BOP Accumulator Sizing and Performance Tool

Changes as made in various revision and releases of the software.

**Manual Revision 02**

**James P. McAdams, PE**  
[www.mcadamsengineering.com](http://www.mcadamsengineering.com)

*All rights reserved. No part of this work may be reproduced, 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, Interlink Systems, Inc., [www.mcadamsengineering.com](http://www.mcadamsengineering.com)*

**Note: API is a registered trademark of the American Petroleum Institute.** Its use in this manual serves only to identify the 16D specification published by API and to refer to BOP stacks and their conformance to that specification and does not imply any support, warranty, or endorsement by API of this software.

Copyright © 2023 Interlink Systems, Inc.  
Published and supported by Interlink Systems, Inc.  
[www.mcadamsengineering.com](http://www.mcadamsengineering.com)



**TABLE OF CONTENTS**

**TABLE OF CONTENTS..... iii**

**1 Revision 2.30 – 7 September 2023..... 1**

## 1 REVISION 2.30 – 7 SEPTEMBER 2023

All densities in the technical notes were wrong because I was not converting from molar density to mass or weight density. This was fixed. Other densities, such as those in the performance tables, were always correct and not affected by this fix.

I did an in-depth rewrite of the code to let the computer select and size the number of bottles. In some cases, the bottles would be undersized and fail the final discharge sequence tests. You could still raise the number of bottles by hand as a work around, but it was inconvenient. This affected, for instance, 2nd Ed Example 9. Example 9 failed if the computer is allowed to choose the number of bottles. It chose 1 bottle. Now it works, as do all of the examples of this problem that I have at this time.

**NOTE:** The code to choose the number of bottles is followed by independent, separate code to check the discharge conditions. The code to check the discharge takes the bottles selected by the software or the operator, and does a numerical simulation of the discharge of the entire bank, surface and subsea. Therefore, the older code that chose an undersized bottle would always fail the discharge test and NOT be falsely labeled as "OK".

Moving from monitor to monitor can change the title bar font size. And resizing the project form can change the amount of room available for the caption. By default, if there is not enough room for the caption, Windows trims characters from the right end of the line of text, which loses the file name. I now trim the characters on the left, instead of the right so that you always still see the file name itself in the title bar.

I changed the check box "Force the Number of bottles" on the subsea tab to "Set the Number of bottles", to format better and match the surface bottle prompt. Also updated the help button dialog box content.

When I started adding release numbers, I altered the folder name holding the example files, but I did not alter the folder name that the program was looking for. So it could not find its example files. This is now fixed/improved.

DCB precharge was referred to as being based on pump stop pressure in a few places, including the technical notes for DCB precharge. It actually uses pump start pressure, which is the right thing to do. Messages were corrected.

Added a Reference on the Help menu item to the 16ST write-up and included it in the installation of 2.30.

Edited the help file error dialog to be more helpful. Long file paths associated with the file name would get messed up.

## 2 REVISION 2.27 – 19 MARCH 2023

This was the first version to have code for Depth Compensated Bottles (DCB). I am not including detailed revision notes for this or prior revisions. If you have a specific question, send me an email and I will look into it.