



Alfa Laval Vortex Mixmate®

Safe chemical mixing barrel

Introduction

Small batch mixing of corrosive chemical solutions is a necessary process for many industrial applications. The hazardous nature of these chemicals imposes safety risks to workers who need to handle and mix them. Mixing barrels are often used to mix these hazardous solutions while keeping them securely contained, minimizing worker exposure to them. The Alfa Laval Vortex Mixmate is an advanced style of mixing barrel designed with durability and optimum safety in mind.

Applications

The Alfa Laval Vortex Mixmate is a high quality harsh chemical mixing barrel that is built to withstand tough industrial applications. It is designed for safe, rapid, homogeneous mixing and dispensing of small batches of hazardous liquids. Its most common use is in oil and gas drilling fluid applications for the purpose of mixing dry caustic soda powder into small batches of solution and feeding it into the drilling fluid to regulate the drilling fluid pH level. Caustic soda solution mixing is a highly exothermic heat generating reaction that results in hot, corrosive liquid that can easily burn skin and eyes. The Mixmate allows easy, proper mixing and dispensing of caustic solution with no risk of physical exposure to personnel.

Benefits

- Simple robust design
- High quality construction
- Low maintenance
- Safe, effective mixing of harsh chemicals
- Easy dispensing of mixed solutions
- Easily integrated with the Alfa Laval Vortex Shear-Mixer

Standard Design

The Alfa Laval Vortex Mixmate consists of a 379 L (100 gallon) stainless steel drum with work table and a protection baffle designed to eliminate the risk of liquid splash-back during mixing. It features a stainless steel, lockable, hinged safety cover with a viewing window. The unit has 38mm (1.5") water inlet and solution discharge outlets equipped with stainless steel ball valves, a 76 mm (3") overflow port, a stainless steel turbine impeller and shaft powered by a four horsepower air motor, and a stainless steel skid base.



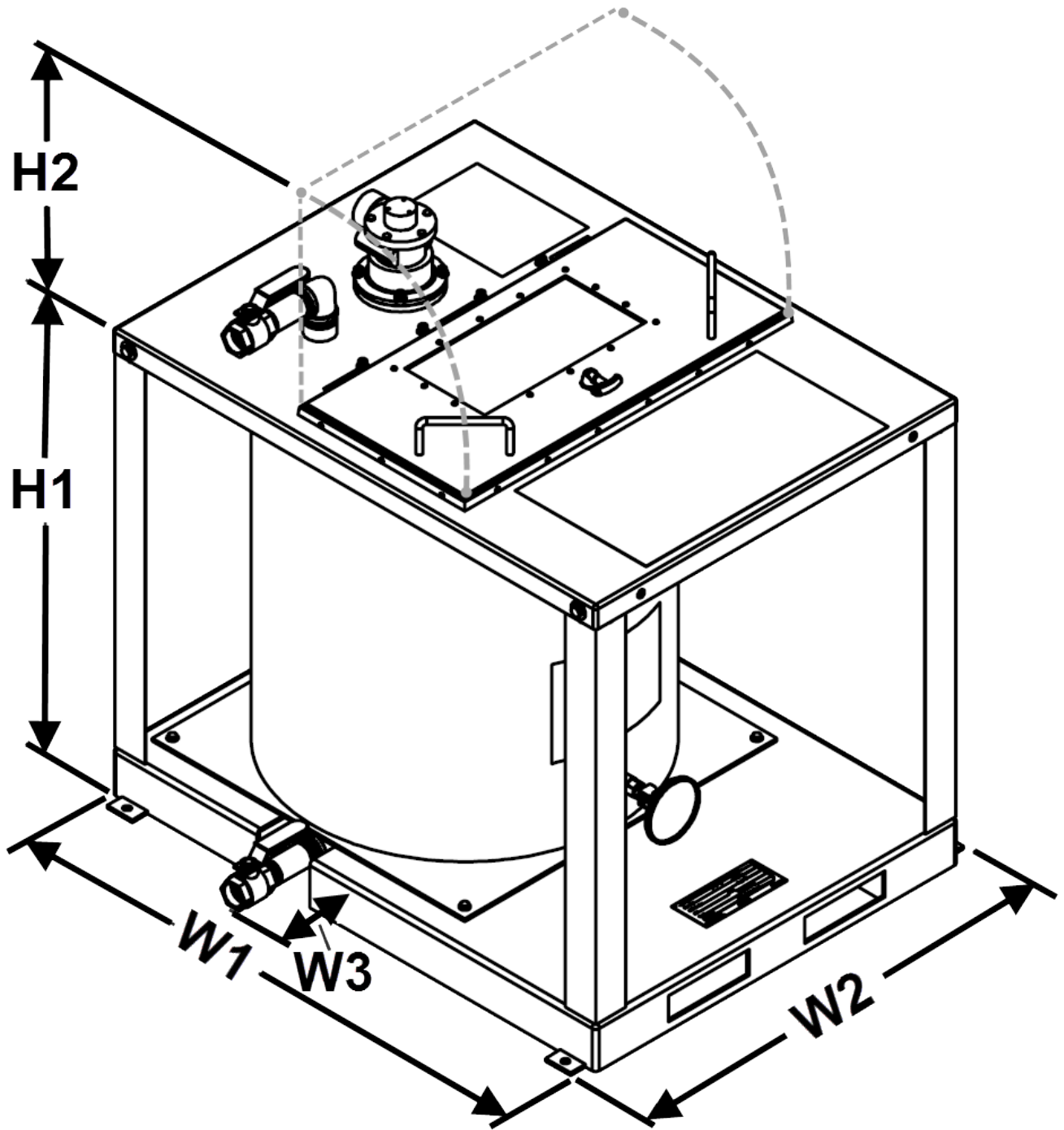
Working Principle

The Mixmate is first filled with fresh water. The 4 horsepower air motor is turned on to agitate the water. The cover is opened and caustic powder or pellets are gradually added into the Mixmate, where they are aggressively mixed into a concentrated solution by the stainless steel impeller. The thermal gauge indicates when the reaction temperature has leveled off and the solution is fully mixed. The solution can then be easily dispensed from the base of the unit and into the drilling mud by opening a ball valve. This allows the solution to either gravity feed into a vessel or pit, or be vacuumed out and mixed directly into a fluid stream by an Alfa Laval Vortex Shear-Mixer.

Technical Data

Maximum caustic powder load	90.7 kg (200 lbs)
Maximum liquid capacity	378.5 L (100 gallons)
Operating air pressure	6.9 Bar (100 PSI)
Weight	277 kg (610 lbs)

Dimensional Drawing



Dimensions

H1	1016 mm (40 in)
H2* <i>Safety door clearance</i>	439 mm (17.3 in)
W1	1219 mm (48 in)
W2	991 mm (39 in)
W3	144 mm (5.7 in)

This document and its contents is owned by Alfa Laval Corporate AB and protected by laws governing intellectual property and thereto related rights. It is the responsibility of the user of this document to comply with all applicable intellectual property laws. Without limiting any rights related to this document, no part of this document may be copied, reproduced or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), or for any purpose, without the expressed permission or authorized by Alfa Laval Corporate AB. Alfa Laval Corporate AB will enforce its rights related to this document to the fullest extent of the law, including the seeking of criminal prosecution.

200000128-3-EN-GB

© Alfa Laval Corporate AB

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com