

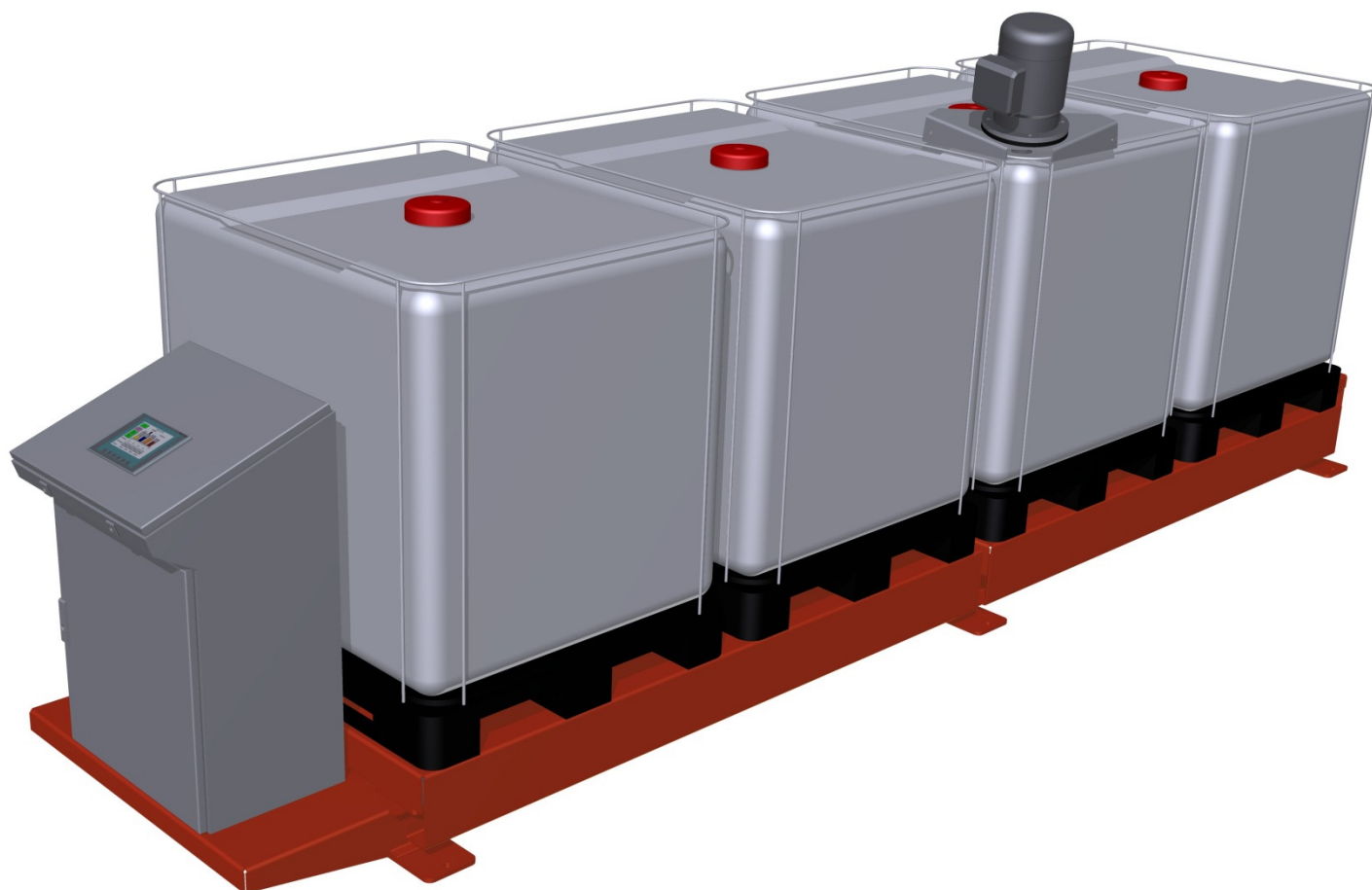
**DenimoTech**  
the road ahead



7 Initsiativnaya St., bldg. 3, bl. IV,  
rooms 1—9, 121357 Moscow  
Russia  
[www.dmliefer.ru](http://www.dmliefer.ru)

## Easy Weigh™

Chemical Dosage System  
For Batch Emulsion Plants



# Content

- Introduction .....3
- About DenimoTECH A/S .....3
- Scope .....3
- Technical Description .....4
- Chemical dosage system tailored for batch emulsion  
plants .....4
- What is the Easy Weigh™ unit? .....5
- Easy Weigh™ - System Description.....6
- Operation .....7
- Technical Data.....8

## Introduction

### About DenimoTECH A/S

DenimoTECH is a global manufacturer of high quality equipment for modification and emulsification of bitumen, with a network of distributors worldwide focusing on helping our customers to be successful.



DenimoTECH is owned by DenimoTECH Holdings in the UK which is a private company focused on generating value for the petroleum, refining and power industries by leveraging their emulsion and industry expertise.

For over a decade DenimoTECH's mission has been to provide both the global road construction industry and oil companies with bitumen emulsion- and bitumen modification technology, innovation and expertise to produce highly stable products for building high performance roads that last, while minimizing the impact on the environment.

DenimoTECH is a worldwide supplier of PMB and Emulsion Technology

### Scope

The scope of this specification is to give a detailed technical description of DenimoTECH CRMB plants. When partnering up with DenimoTECH innumerable possibilities are offered. We are always tailoring the plants according to our customers' needs. This specification covers the most common details and options. For further details or inquiries, please contact DenimoTECH directly.



DenimoTECH is a strong partner. We make sure that our customers get exactly what they need.

## Technical Description

### Chemical dosage system tailored for batch emulsion plants

The DenimoTECH Easy Weigh™ unit is designed to fit all batch emulsion plants, regardless of brand. It is a perfect match to both advanced fully automatic plants and the simplest manually operated systems.

Chemical dosage is a critical process when producing emulsions:

- High risk of failed production as a result of manual balancing of the chemicals
- Personnel safety is often compromised
- Difficult to document the applied quantities
- Open dosage systems or unintended incidents may severely damage the emulsion plant and peripheral installations
- Manual dosage systems are very labor intensive

The DenimoTECH Easy Weigh™ unit solves all the well-known problems in the old manual dosage systems. It is a cost effective unit that brings value to the emulsion manufacturer from day one.



Easy Weigh™ in a conceptual setup (CAD rendering)

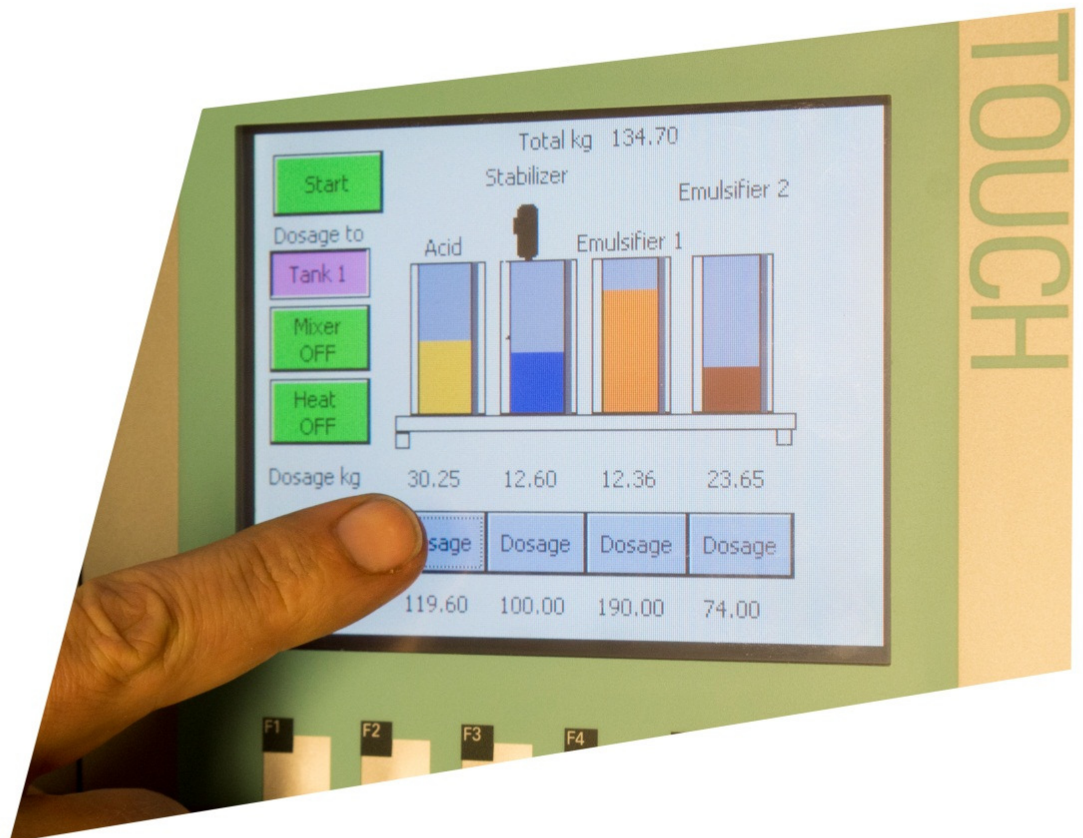
## What is the Easy Weigh™ unit?

The Easy Weigh™ unit is an advanced dosage scale with build-in PLC control to ensure easy and accurate dosage of chemicals for emulsion production on batch plants. The unit, including its pumps, is highly corrosion resistant to nearly all chemicals, including concentrated hydro chloric acid.

The unit is easily operated through the touch screen, and the chemicals are added in a user-defined sequence. Recipes are defined and stored in the PLC to ensure the highest possible degree of product verification. Once the unit is programmed the dosage of chemicals are endlessly carried out by pushing the start button on the touch screen – time after time.

The unit measures direct mass (kg). All recipes can be imported directly into the recipe database in the PLC – no density compensation is needed.

The unit comes in two overall versions; one for 55 gallon (200 liter) drums and one intended for IBC containers (1000 liter). The drum version is delivered with a high quality fitting system, that allows safe and fast exchange of drums on the

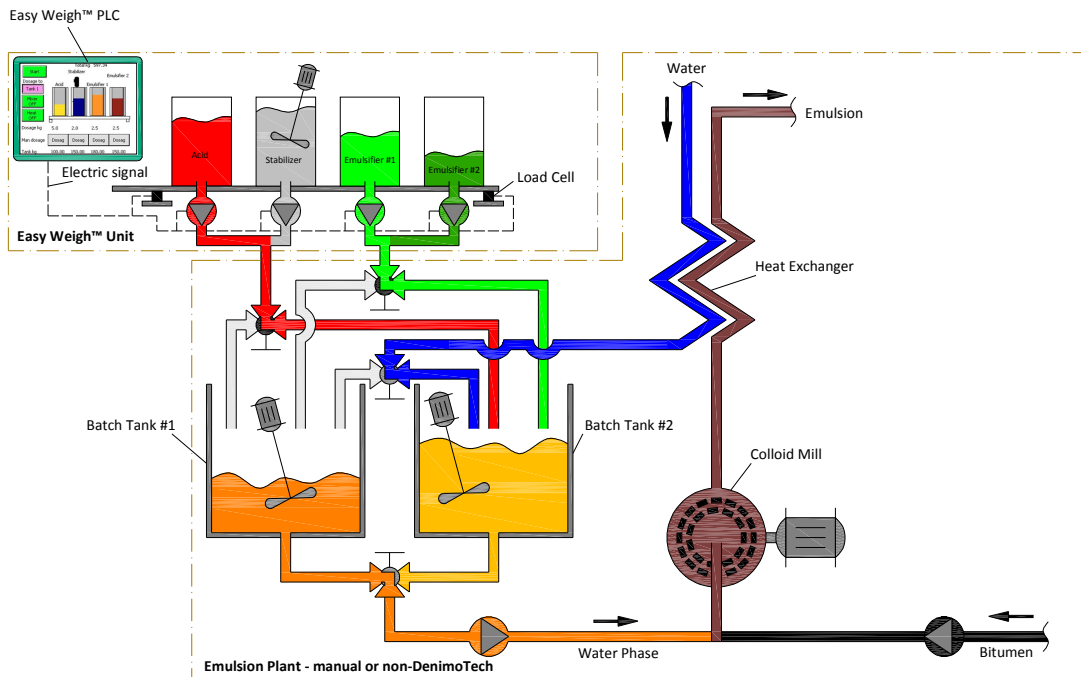


scale.

## Easy Weigh™ - System Description

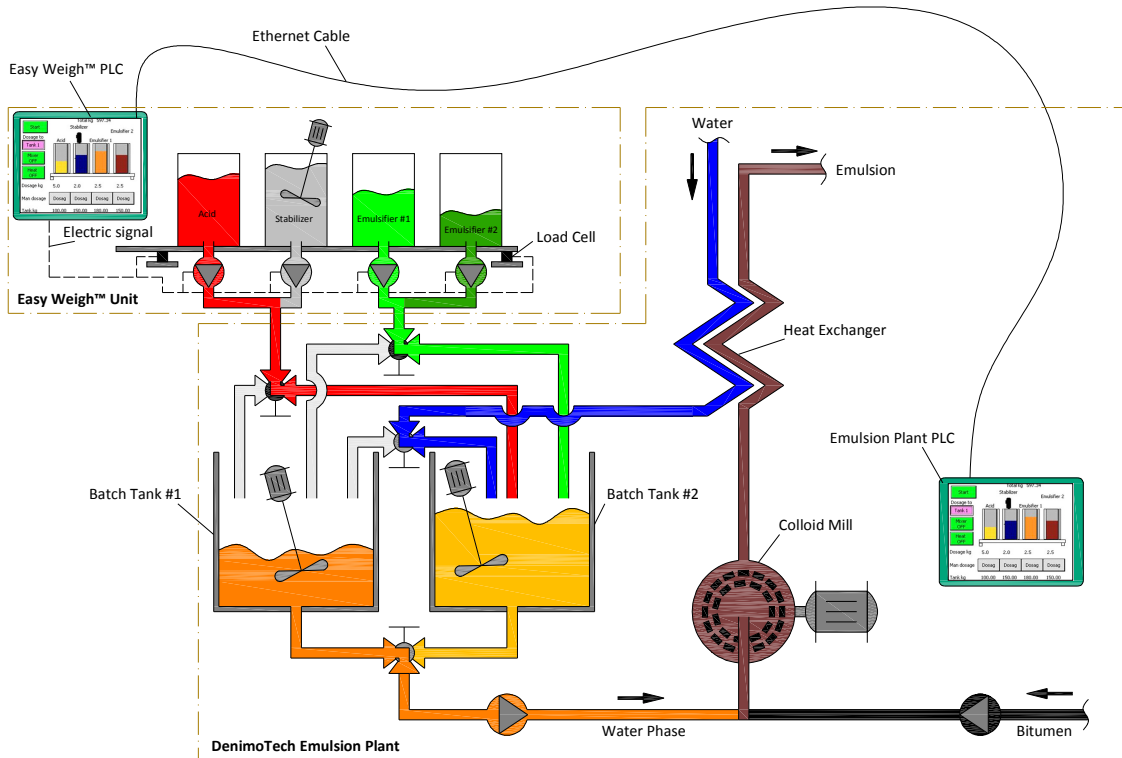
The Easy Weigh™ unit fits with every batch plant on the market. It can be operated as a stand-alone unit to fit manually operated batch emulsion plants or non-DenimoTECH plants. If purchased with a DenimoTECH emulsion plant with PLC, the Easy Weigh™ unit can be fully integrated into the emulsion plant, and operated from the system PLC or the PLC on the Easy Weigh™ unit.

Easy Weigh™ in “stand-alone” installation:



Conceptual Diagram, Easy Weigh™ in “stand-alone” installation

## Easy Weigh™ integrated with a DenimoTECH emulsion plant:



Conceptual Diagram, Easy Weigh™ integrated with a DenimoTECH Emulsion plant

## Operation

The Human Machine Interface (HMI) is a touch screen located on the side of the unit. If the Easy Weigh™ unit is integrated in a DenimoTECH emulsion plant, the HMI is part of the overall system PLC/touch screen. The software is easy to use and all relevant parameters are shown on the monitor.

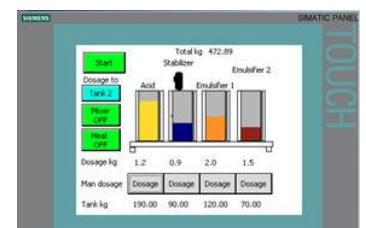
Each of the four chemicals can be programmed to inject a certain quantity (kg) for each sequence. When pushing the start button the acid pump will start. Then the stabilizer and the emulsifier(s) will follow, and the sequence is then ended. The operator must then shift the chemical injection valve to water batch tank #2. When pushing the start button, the same sequence will be repeated.

An Easy Weigh™ unit integrated with a DenimoTECH batch emulsion plant, can be true “fully automatic” if valve actuators are installed on the emulsion plant (option). The shifting between the batch tanks will be carried out by the system PLC.

The level in the chemical tanks is monitored and a warning will be given in case of a critical low level.

All programmed injection sequences can be easily stored as a recipe in the recipe database and reloaded for future use.

Small quantities of acid can be post-added to ensure the required pH value in the water phase batch tank.

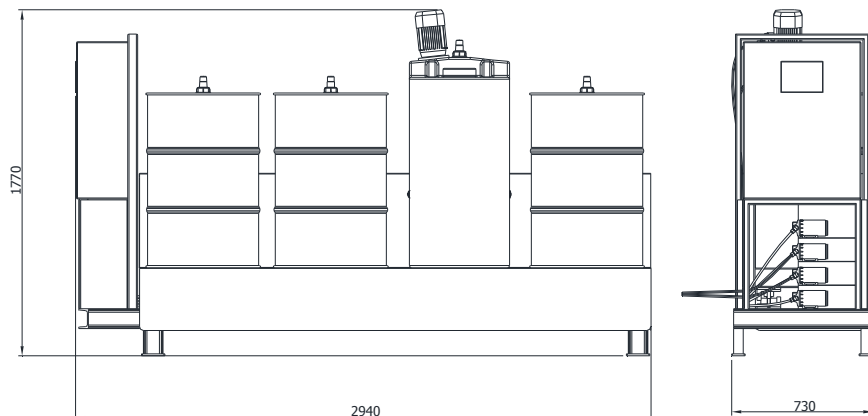


Touch Interface and clear LCD display for easy operation

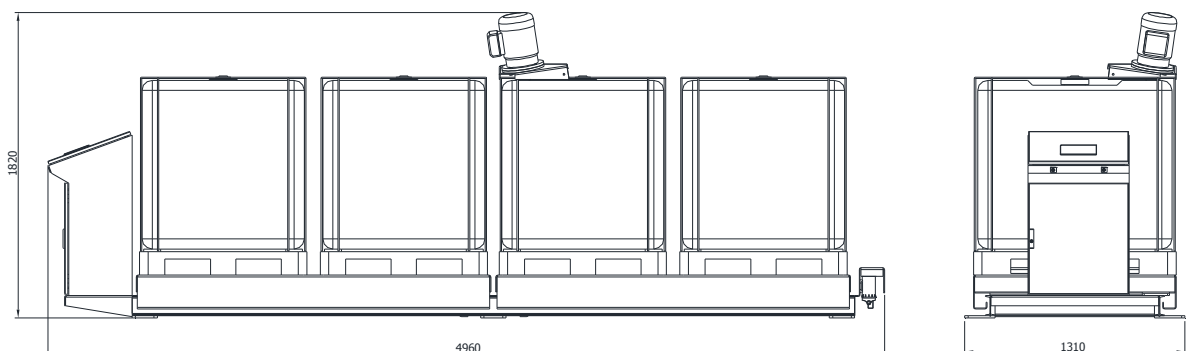
## Technical Data

Model		EWU-DRM-4	EWU-IBC-4
Chemical Storage System	-	Drums, 55 gallon/200liter	IBC Containers (max 1000 liter)
Number of chemical dosage lines	-	4	4
Max total chemical capacity (net.)	Kg	900	4500
Minimum display	Kg	0.025	0.050
Dosage Pumps, flow rate (all lines)	Liter/min.	7	7
Repeatability (std. deviation)	Kg	0.030	0.060
Agitator, stabilizer	KW	0.18	0.75
Control system	-	PLC	PLC
Human Machine Interface (HMI)	-	Touch screen	Touch screen
Display	-		
Heating, emulsifier (option)	W	2x1000	2x1500
Power Supply	-		
Operating temperature	°C	0 to 40	0 to 40
Mass (empty)		320 kg	430 kg
Product approval	-	CE marked	CE marked

External Dimensions (mm), EWU-DRM-4:



External Dimensions (mm), EWU-IBC-4:





**DenimoTech**  
the road ahead



7 Initsiativnaya St., bldg. 3, bl. IV,  
rooms 1—9,  
121357 Moscow  
Russia



tel.: +7 (499) 990-05-50  
+7 (800) 775-29-59  
email: [info@dmliefer.ru](mailto:info@dmliefer.ru)  
[www.dmliefer.ru](http://www.dmliefer.ru)