

EAGLE IRON WORKS - CLASSIFYING TANK CONTROLS

DIGITAL DIALSPLIT & MARK X



eagleironworks.com

EIW
EAGLE IRON WORKS
A McLanahan
Company

DIGITAL DIALSPLIT

The Digital DIALSPLIT is the latest base control system for Sand Classifying Tanks. Compatible with almost any brand of Sand Tank, the Digital DIALSPLIT enables you to control your operation with percentage-type settings, making for quick and easy product control. The advanced memory system allows you to save up to 12 recipes to reference at any time.

The Digital DIALSPLIT control is simple to understand and operate. Classifying Tanks are divided into stations that each contain a rotating sensing paddle and two, three or four valves. The number of valves per station is determined by the number of cells in the collecting/blending flume. Each cell can produce a controlled product, with one cell yielding a residual product. For example, a three-cell tank would produce two controlled products and one residual product.

When the accumulation of sand in each station causes the sensing paddle to stall, this signals the Digital DIALSPLIT to actuate the valves. The valves remain open for a predetermined amount of time, releasing a percentage of material into the collecting-blending flume beneath the Classifying Tank.

The percentage setting at each valve station is determined by the pit gradation required to meet a typical construction sand product specification. Once you set the correct percentage, the Digital DIALSPLIT system will continue to dispense sand in the selected proportions.

A Digital DIALSPLIT System can be provided to replace the outdated analog/mechanical DIALSPLIT or AutoSpec systems still in service.



Design Features

All electronic components are protected by a Nema 4 rated enclosure for added protection against dust, dirt, splashing water, rain, sleet, snow, ice, etc.

Remote monitoring allows for easy troubleshooting and diagnosis

Standard ethernet connection via eWon VPN router, with option for cellular connection to the PLC

Industrial IoT connectivity

VNC server for remote HMI access/control

Allen Bradley CompactLogix PLC for remote support

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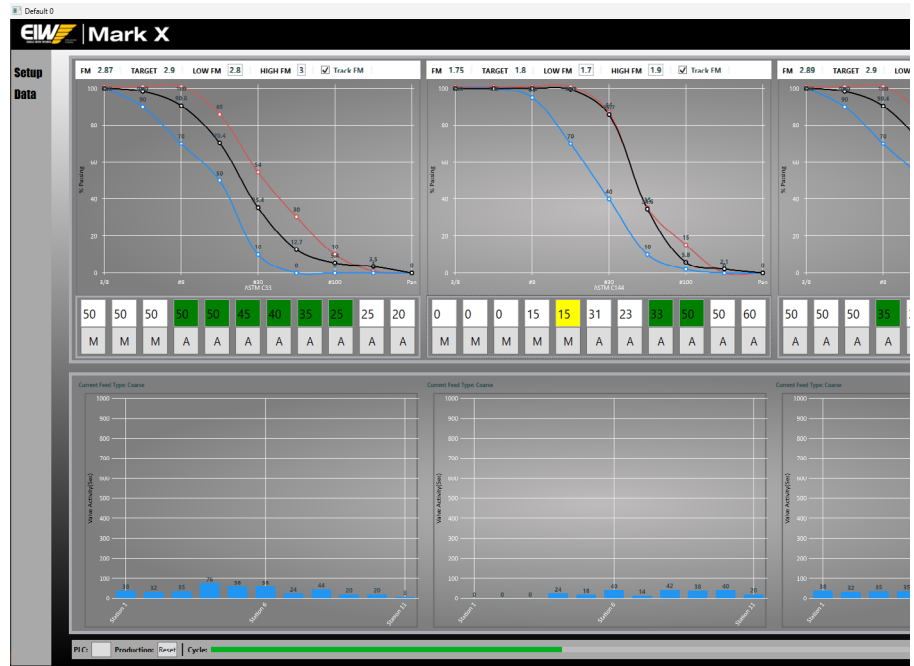
MARK X

EIW's Mark X software is an add-on feature to the Digital DIALSPLIT base system and provides the ultimate in sand rebinding systems. It enables an operator to produce the highest yield of two construction grade sand products in a Classifying Tank. The Mark X has been developed and field tested by software engineers to ensure maximum productivity.

If recent pile gradation analysis shows production as being close to or out of spec, the Mark X software does the complex calculations to maintain or bring sand production back in range of typical construction sand specifications. Periodic product pile gradation input data allows the software to maintain spec sand production when the feed changes.

The screenshot shows the 'Tank 0 Calibration' window. It contains three main sections: 'Stock Pile 1', 'Stock Pile 2', and 'Stock Pile 3'. Each section has a table for 'Product 1 (Calculated)' and 'Product 2 (Calculated)' with columns for Sieve, % Passing, % Retained, and Weight Ret. Below these tables are 'Spec 1' and 'Spec 2' sections with radio buttons for 'ASTM C33', 'ASTM C144', 'NON SPEC', 'Bunker Sand', and 'Default'. A 'Valve Data' table is also present. At the bottom, there are buttons for 'Save Calibration', 'Save Targets', and 'Save Flow'.

The computer screen's display constantly updates to show the in-spec product as it hits the stockpile.



Design Features

Enhanced tank configuration with 7 to 11 stations per tank and 2 to 3 valves per station

PC screens with intuitive commands, all necessary information readily available and real-time valve status indicators

Auto and manual valve control, allowing manual operation, manual valve percentage input and tap-to-open functionality

Stockpile calibration improves accuracy and simplifies the calibration process

Production tracking

Remote support

Can adapt to multiple feed locations

Optional remote monitoring available with additional hardware

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