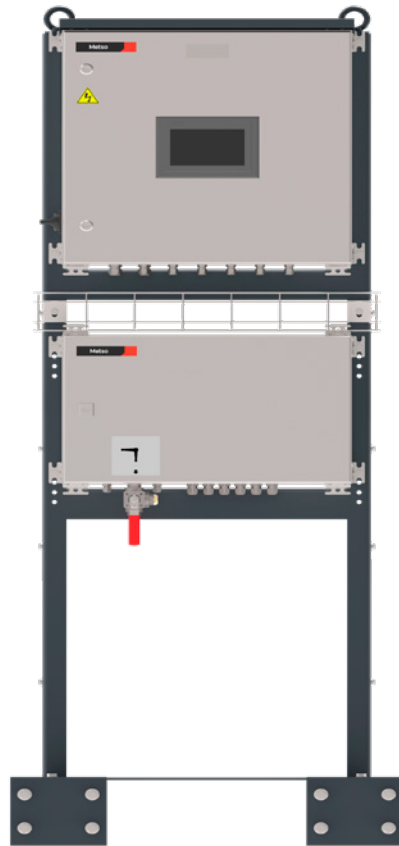


Metso

Intelligent flotation solutions

CellStation



An intelligent solution for controlling the air feed and pulp level in flotation cells. The Metso CellStation helps to simplify level control, resulting in improved flotation circuit performance.

Accurate level control for improved metallurgical performance

Controlling pulp levels in flotation cells is a complex task with many different aspects, such as the effect of cell structure and valve sizing, to take into account. Control becomes more challenging as the number and complexity of cells in a configuration increases.

The second-generation Metso CellStation builds on the success of the previous-generation solution and is based on Metso's strong track record in this field, with more than 400 units sold since its introduction in 2008.

Maximized availability with comprehensive support

Because the Metso CellStation uses hardware and software components that are common to many of our product lines, support is readily available from our extensive team of experts to minimize downtime. This also helps to reduce the need for specialized training of on-site operators.

Accurate level control and increased process stability

The pulp level is stabilized by the embedded Metso ExactLevel controller. Compared to traditional PID controllers, the Metso ExactLevel enables more accurate level control and significantly reduces process disturbance. This results in more stable froth conditions and improvements in the flotation cell's metallurgical performance.

The Metso ExactLevel operates with the standard PID control and compensates for disturbances generated by upstream sources before they affect the pulp level in the cell.

It also has plug-and-play connectivity with the Metso FrothSense sensor system, which measures essential properties of froth appearance, including froth speed, direction, bubble size, froth stability, and froth color and provides statistical data related to these variables.



Benefits

- Easy operation
- Improved recovery and product grade with embedded Metso ExactLevel controller
- Plug-and-play connectivity with Metso FrothSense for increased process stability
- Short delivery lead time and fast installation and commissioning

Application CellStation uses Metso's ExactLevel controller, which improves the metallurgical performance of flotation cells by enabling more accurate level control and significantly reducing process disturbance.

CellStation

Main features

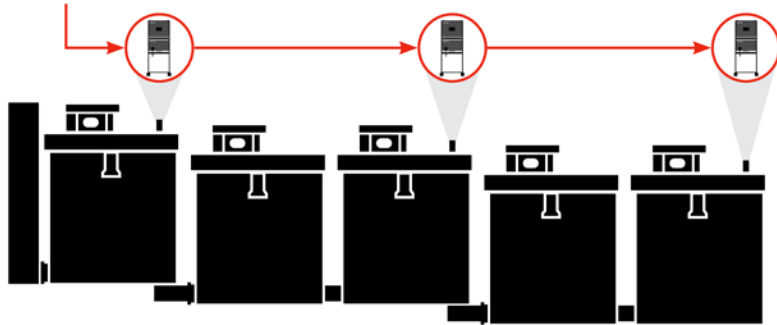
Level control valves (max amount)	3
Flotation air control valves (max amount)	4
Feedback from valve position	Yes
ExactLevel / Feed forward algorithm	Yes
Plug-and-play connectivity	Yes
Display	7" outdoor readable
Communication protocol to DCS	Profinet. Modbus TCP/IP Option 1: Profibus DP Option 2: Ethernet/IP
Power distribution	24VDC

Technical specifications

Hardware components	7 inch SIMATIC HMI Comfort Outdoor Panel TP700 PLC Siemens Simatic S7-1500 Stainless steel (AISI304) control panel with painted (RAL 7035) mild steel pedestal Instrument air distribution manifold and double filtering (G½") Main switch
Software components	Software programming tool: Siemens TIA Portal Programming language based on IEC 61131-3: <ul style="list-style-type: none"> • Function Block Diagram (FBD) • Structured Control Language (SCL) Trend logging and visualization with Metso proprietary standard library software components Pulp level control Flotation air control Trending of all monitored values Embedded adaptive ExactLevel control algorithm
Connections	One physical RJ45 port connection either to: <ul style="list-style-type: none"> • Plant control system (DCS) via Profinet- or Modbus TCP/IP- or • Metso FrothSense camera system via OPC UA protocol
Options	Installation accessories (signal cables, instrument air tubes and connectors) Profibus DP module Ethernet/IP module
Installation requirements	Operating temperature: -10°C to +45°C, direct sunlight should be avoided Storage temperature: -25°C to +60°C Relative humidity 90 %; no condensation Installation altitude above sea level, max. 3000 m (depending on operating temp.) Enclosure: IP65 (electrical box and main switch) Supply voltage with AC 120 ... 230 V, rated current 2.2A ... 1.2A Supply voltage with AC 230 ... 500 V, rated current 1.2A ... 0.61A Supply frequency 50 ... 60Hz
Dimensions	W 678 x H 1962 x D 378 mm, weight 113 kg

Metso CellStation

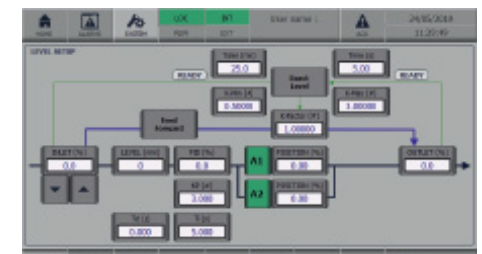
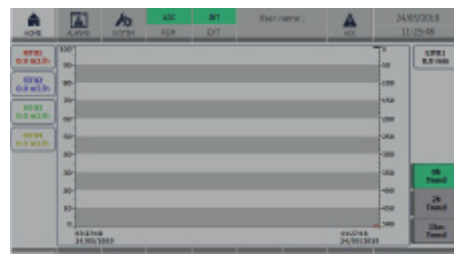
Fieldbus to plant control system



Typical scope

- PLC cabinet
- Instrument air manifold with integrated filtering
- Cables and installation accessories
- Automation engineering, configuration and factory acceptance testing

Metso CellStation shares a common user interface with other Metso local control systems.



Read more at metso.com/portfolio/cellstation