



# PME100

Height and 2D envelope monitor



Height



Envelope  
monitoring



## Basic functionality

PME100 is designed for monitoring and controlling the movement of any articulating construction equipment. The system measures position through sensors to guide the operator to stay within a user defined working envelope. The basic system monitors vertical height with a fully featured variant available to monitor the machine's vertical 2D envelope (height, reach, cab protection and depth), fully describing the machine's working envelope. Optional control on hydraulic motion can be installed to automatically override movement on reaching user-set limits.

## Suitable for:

- Excavator (multiple articulations possible)
- Telehandler (height only)
- Mobile cranes (height only) (to EN13000:2010)
- Truck mounted cranes
- Forklifts (height only)

## Features:

- Real time height throughout the full movement range of the machinery
- 'Always on' controller monitors and stores machine state ensuring through traceability
- Variant with full 2D envelope controlling depth, maximum and minimum radius
- Monitors and controls machine position remaining within set limits (motion cut required)
- Optional motion cut on height and 2D envelope
- Fully described cab protection allowing for complex shapes
- Controllable override function during digging operations
- Temporary override allows operators movement to safe conditions during limit states
- SIL1 safety version as standard. SIL2 as an option (per EN62061)
- Warning on approach to limits (audible and visual)



- Telescoping boom inputs allowing for extending booms (e.g. telehandler (height only))
- Height limit input via “set to current”; user- defined or pre-set absolute values
- Master override key switch for secure disabling of safety features
- External alarm on over-height
- External beacon to provide indication of system state (on/off)
- Complex shapes possible when describing cab protection
- ‘Crawl’ function when close to user-set limits preventing overshoot
- Multiple languages
- Upgradable to other PME configurations through software (some hardware may be required)
- Ability to include any tool in height limit (extra hardware required)
- Access control levels: operators, supervisors and installers
- Icons displaying current state of movement control (motion cut or warning)
- On screen display of height, range and depth limits
- USB, serial and CAN interface
- Mapable and expandable I/O on controller
- Smart override monitors signals from key-switch to controller allowing context specific control
- Multiple sensor types available depending on machine size, shape and configuration
- Fully sealed sensors with CAN cabling provide superior reliability and signal clarity
- Simple plug and go M12 connectors for input and output
- Tamper evident connectors show ID on screen on failure/disconnect

### Standards, Tests and Specification

Full testing, traceability and control on design to ensure the operation is as planned and the functionality as safe as possible.

- Complies with H&S requirements on the machinery directive EN2006/42/EC
- Designed to meet EN474 ‘Earth-moving machinery – Safety’
- EMC EN13309:2010; EN50121-3:2006
- Tested for vibration, temperature, impact and environmental protection to standards
- Controller tested to IP67 and IP69k, display rated to IP65
- Display daylight viewable (650cd/m2)
- Input voltage 10-32V

### Hardware and user interface

- 4.3” super-bright daylight viewable landscape HD screen
- Fully sealed capacitive touch buttons
- 2 selectable display modes
- Indicator for safe movement displayed at limits
- Real-time display of height and 2D envelope (if installed)
- Icon driven context specific menus and help functions

### Set-up and machine data

- CAN sensor input with separable ID on each component
- 4GB storage of operating data (approx 12 months usage). Download to remote PCs as required
- Configurator allowing input of machine data off site and upload to machine on install
- Default settings shipped with each system can be reconfigured as needed

### Configurator

Options	Base Part Number	Motion cut height (only)	Motion cut envelope (height min/max radius, depth)	SIL2	External alarm	External beacon	External keyswitch	Extending boom	No screen	Basic	4.3” daylight viewable	Multiple lifting duties
Single boom (e.g crane/telehandler)	PME100C	H	H	2	A	B	K	Z	N	Standard	4	
Mono boom (excavator)	PME100M	H	H	2	A	B	K	Z	N	Standard	4	
Triple boom (excavator/crane)	PME100TC	H	H	2	A	B	K	Z	N	Standard	4	
Multiple articulations	PME100X	H	H	2	A	B	K	Z	N	Standard	4	

Example: PME100TH - Triple Excavator PME100 with motion cut on all articulations on height.

Example: PME100XEA - System with multiple articulations (e.g. cargo handler, truck crane) with motion cuts on height, min/max radius and an external beacon.