



ConMatic IPC, Automated Consolidation System— HM-2470A.3F

The ConMatic IPC is a fully-automated, incremental pressure controller for performing incremental consolidation and one-dimensional swell tests. The ConMatic IPC allows consolidation and constant load and volume swell tests to be run automatically, freeing up technicians for other tasks and reducing the duration of the testing procedures by more than half—effectively saving time and manpower and increasing lab profitability. One ConMatic automated system can replace the production of several manual machines— running incremental consolidation tests according to ASTM D2435 Method B, where successive load increments are applied after 100% primary consolidation.

Once a sample has been placed onto the test platform and the test conditions set, the ConMatic IPC, used in conjunction with a computer and Humboldt's HMTS software, performs all consolidation tests, including moving to the next stress level, without operator assistance. The system automatically moves through the different test parameters specified by the user with incremental consolidation tests typically being completed in 24 to 48 hours. The HMTS software records readings from the force and displacement transducers to control the unit's exceptionally accurate stepper motor. Test results are recorded and rendered in real-time on the computer screen while test data is stored and calculations are performed automatically. The HMTS software provides:

- Live tests and live graphing capabilities (real-time)
- Complete test reporting including all calculations and graphs required for testing
- Review and exporting of tests using Microsoft Excel
- Smart Test Function: automatically picks up where it left off if the test was not finished due to unexpected events within your computer

The unique design of the ConMatic IPC system enables the user to choose from multiple tests and run them independently and simultaneously.

Applicable Test Standards

ASTM: D2435, D4546, AASHTO: T216, BS: 1377:5

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The ConMatic IPC system requires a supply of good clean compressed air and a computer, please contact Humboldt for system requirements.



HM-2470A.3F with HM-1220.25, HM-2310.10 and HM-2310BR

ConMatic IPC Typical Setup:

| Part # | Qty | Description |
|-------------|-----|---------------------------------------|
| HM-2470A.3F | 1 | ConMatic IPC |
| HM-1220.XX | 1 | Fixed Ring Consolidation Cell |
| HM-2310.10 | 1 | Linear strain transducer, 1.0" (25mm) |
| HM-2310BR | 1 | Strain Transducer Bracket |
| HM-1100SW | 1 | HMTS Consolidation Reporting Software |

Specifications

| | |
|-----------------------|--|
| Sample Size | up to 4" (100mm) |
| Maximum Load | 2200lbf (10kN) |
| Vertical Clearance | 8.25" (210mm) |
| Horizontal Clearance | 7.75" (197mm) |
| Maximum Piston Travel | 0.5" (12.7mm) |
| Dimension (L x W x H) | 12 x 12 x 30 inches (300 x 300 x 750 mm) |
| Weight | 42 lbs. (19Kg) |