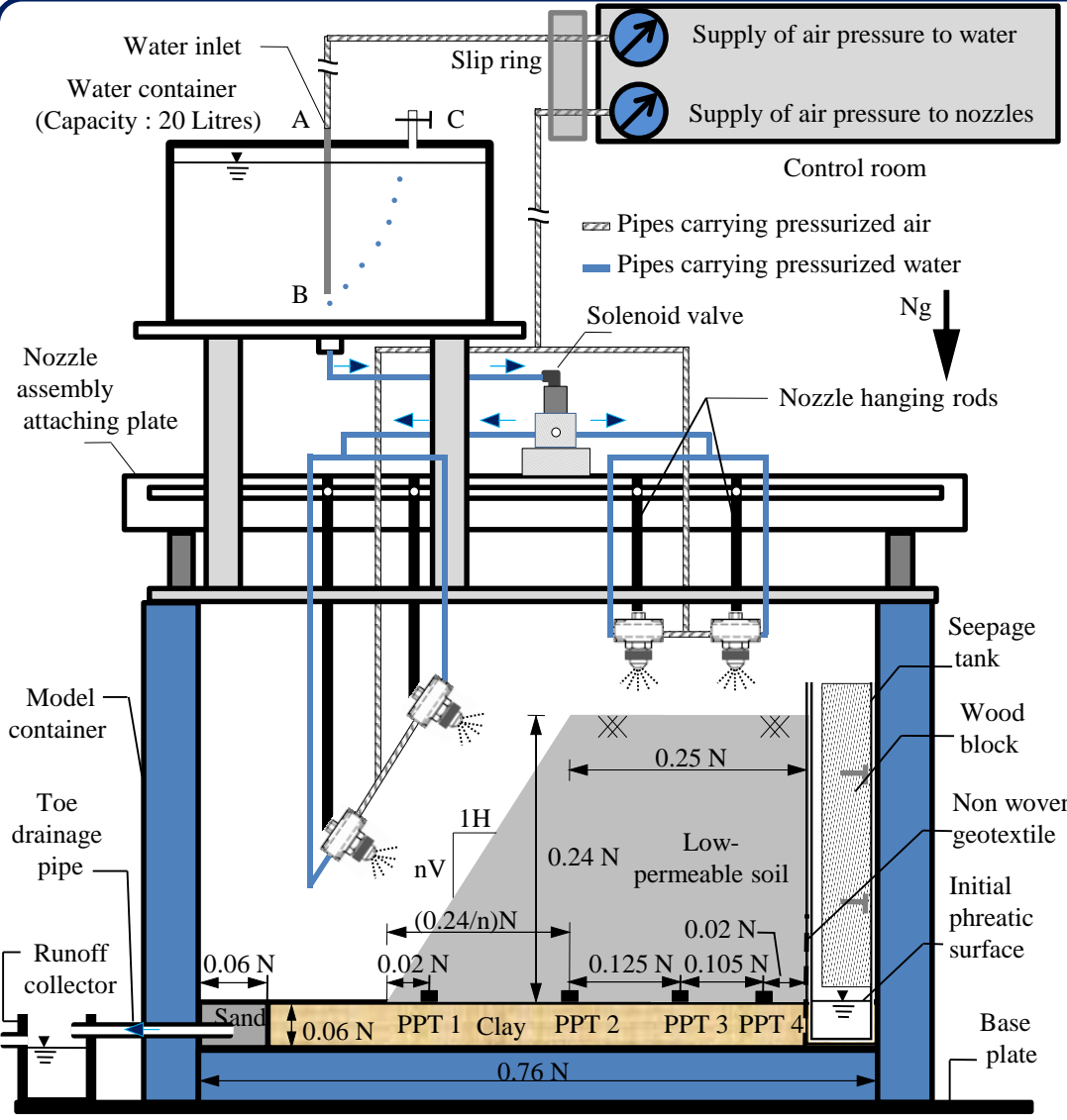


# Design of actuators for geotechnical centrifuge modelling

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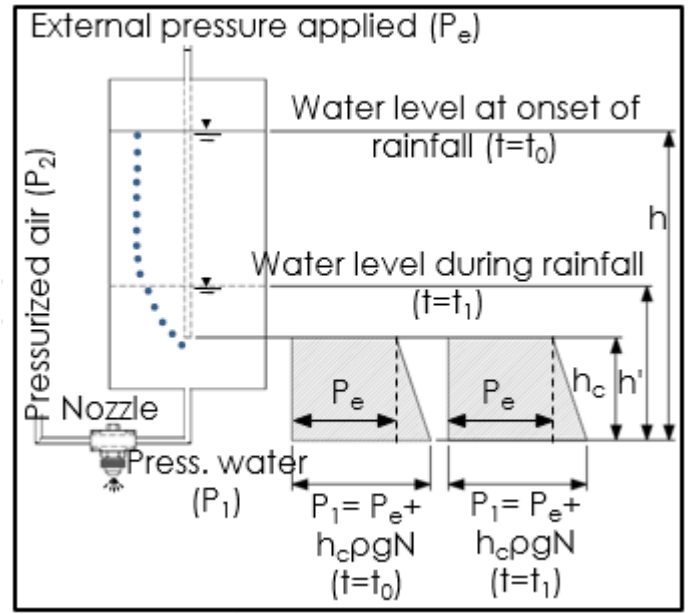
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## Design of in-flight rainfall actuator



- Rainfall intensity: 2 mm/h - 80 mm/h (highest recorded to date)
- Duration and intensity of rainfall can be controlled remotely in-flight
- Uniform rainfall is ensured based on Modified Mariotte's principle
- Adequate measures taken to counteract Coriolis Force at  $N_g$

### Modified Mariotte's principle

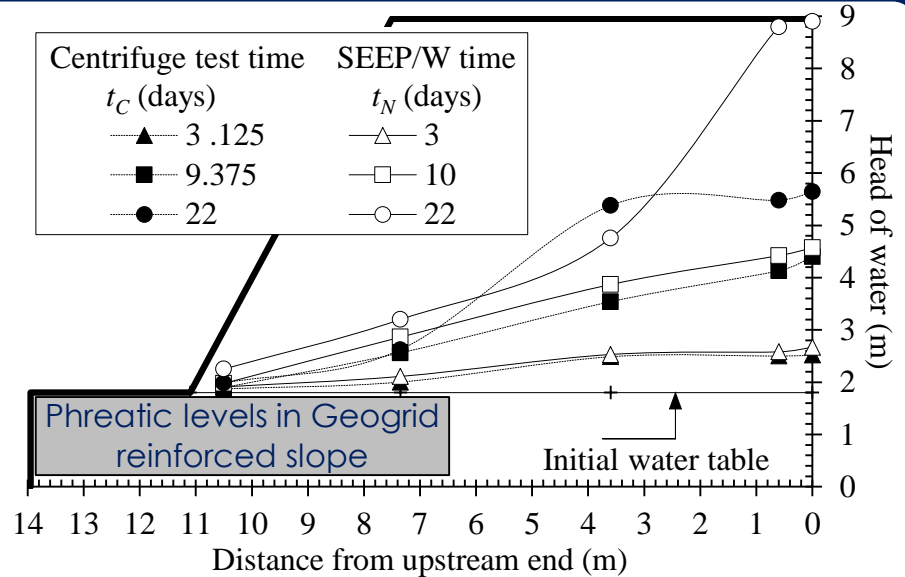
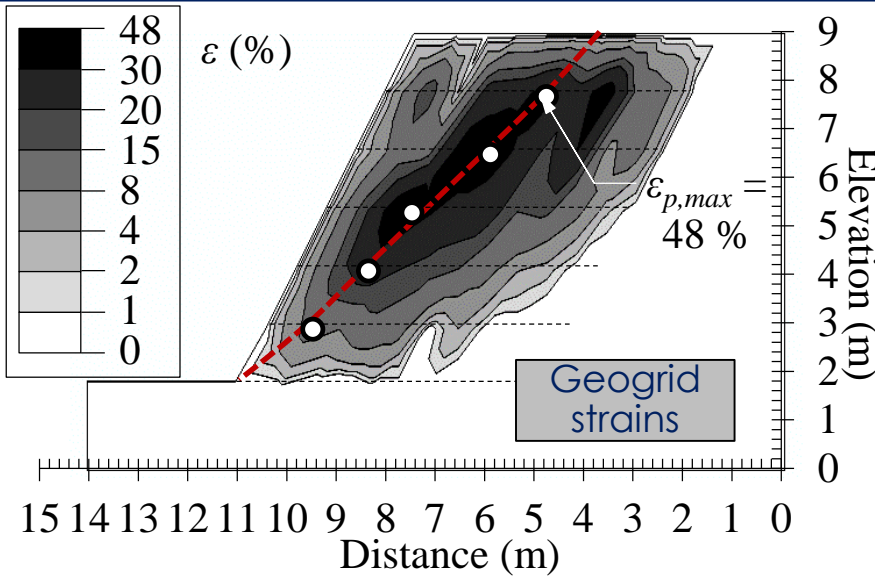


- ✓ Constant head
- ✓ In-flight regulation of rainfall intensity

# Modelling of rainfall induced slope instability

## Mitigation: Geosynthetic inclusions

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Geocomposites, a combination of non-woven geotextile with woven geogrid was effective in mitigating rainfall induced slope instability

