



cooperative  
governance

Department:  
Cooperative Governance  
REPUBLIC OF SOUTH AFRICA

## MUNICIPAL INFRASTRUCTURE SUPPORT AGENT (MISA)



CPD 2 credits (ECSA)

# Pressure Management and Pressure Reducing Valves

The Municipal Infrastructure Support Agent (MISA) in partnership with SAICE Professional Development & Projects (SAICE-PDP) invites you to attend this 2-day course to learn how to use **pressure-reducing valves to reduce leakage from water reticulation systems whilst ensuring that a minimum level of pressure is maintained to consumers.**



### Attend this course and learn about:

- The principles of pressure management
- The use of smart controllers
- Factors to consider when selecting a control valve
- Sizing of pressure reducing valves (PRVs)
- The design of PRV chambers
- Practical network design tips

### By attending this course, you will:

- Acquire the knowledge, concepts and principles of water conservation and demand management
- Broaden your knowledge of best practices in the field of leak detection and pressure management
- Become acquainted with the appropriate equipment to select for managing zones, logging and ensuring pressure reduction

### Presenters:

Ronnie McKenzie Pr Eng, DEng, FSAICE  
Niel Meyer Pr Eng, MSAICE

### COURSE SCHEDULE

Venue: TBC

Dates: 05 – 06 March 2026

Time: 08:30 for 09:00 to 16:30

### REGISTRATION

To register, visit [www.saicepdp.org](http://www.saicepdp.org)

For more details contact Phathi Masimirembwa:

Email [phathi@saicepdp.org](mailto:phathi@saicepdp.org) / Tel: 011 476 4100

### WHO SHOULD ATTEND

This course is recommended for:

- Managers in water service departments
- Engineers, technologists and technicians responsible for pressure management, and those involved in operations and maintenance of water networks

South Africa is recognised as a water-scarce country. The efficient management of water networks is critical for the optimum use of this precious resource while providing adequate pressure for consumers.

Pressure management has been shown to be one of the key factors that can help to reduce leakage from water reticulation systems but it is important that a minimum level of pressure is maintained to consumers.

Key topics to be covered include:

- Objectives of Water Conservation and Water Demand Management WC/WDM.
- Background to water supply in South Africa, augmentation schemes and the importance of reducing water losses
- Burst and Background Leakage Estimate (BABE)
- Measurement and analyses of the minimum night flow to assess the level of leakage
- The Infrastructure Leakage Index (ILI)
- Preparation of a Water Balance and the use of water audit software
- The principles of pressure management
- Basic design of pressure management zones including sectorisation
- Meter selection and sizing
- Pressure logging equipment
- Interpretation of flow and pressure logging results
- The dangers of intermittent water supply
- Pressure variation during peak and low demand periods
- The use of smart controllers
- Factors to take into account when selecting a control valve
- Sizing of pressure reducing valves (PRVs)
- The design of PRV chambers
- Case studies and practical network design tips



**Dr Ronnie McKenzie** is a civil engineer who holds a doctorate in Hydrology and Deterministic Modelling, is registered with the Engineering Council of South Africa and is well recognised as being a specialist in water demand management. During his career he has been involved in major projects throughout South Africa, the neighbouring states, Australia, New Zealand, India, Thailand, Ethiopia, Brazil and the USA among others.

Dr McKenzie has been involved in the development of three of the largest advanced pressure control installations in the world namely Khayelitsha, Mitchell's Plain and Sebokeng.

**Niel Meyer** is a Professional Civil Engineer (Cum Laude) with more than 20 years' experience in the field of water loss control, specializing in pressure management.

Niel is regarded as one of top pressure management specialists in the country and has designed and commissioned over 100 large Pressure management installations including Mitchell's Plain.



SAICE-PDP's Municipal Academy was established to support practitioners employed in local government with applying theoretical knowledge and relevant legislation in practice.

**municipal academy**  
the road to service delivery



MISA's mandate is to provide technical support and advice to municipalities, whilst strengthening their capacity, for effective infrastructure planning, delivery, operations and maintenance.