

Domain	PLUMBING	Unit ID: 456
Title:	Install and adjust water service controls and devices	
Level: 2		Credits: 5

Purpose

This unit standard specifies the competencies required to install water service controls and mixing devices used to manually control water mix and flow. It includes the basic adjustments and maintenance of correct flow operation for flushing devices, control valves, pumps and appliances.

This unit standard is intended for those who work as plumbers.

Special Notes

1. Entry information:
 - Prerequisite
 - 434 - *Apply safety rules and regulations in plumbing operations or demonstrated equivalent knowledge and skills.*
2. To demonstrate competence, at a minimum, evidence is required of installing and adjusting one (1) cold water service incorporating both manual and programmed devices and the other of a pumped hot water service consisting of mixing and tempering valves.
3. Assessment evidence may be collected from a real workplace or simulated real workplace or an appropriate simulated realistic environment in which plumbing operations are carried out.
4. Materials may include but are not limited to taps, water flushing devices, control valves, pumps and domestic/industrial appliances.
5. Water service controls and devices may include but are not limited to:
 - water control and mixing devices include temperature control devices, line strainers, isolating valves, metal bodied taps and limiting valves
 - furnishing devices include cisterns
 - control devices include manual, automatic, safety, flow control and isolation.
6. Performance of all elements in this unit standard must comply with all relevant workplace requirements and/or manufacturers' specifications.
7. Safe operating procedures may include but are not limited to recognising and preventing hazards associated with the use of tools and equipment, trip hazards, underground services, surrounding structure and facilities, hazardous materials, other machines, working at heights, working in proximity with others, worksite visitors, the public and may include working in confined spaces.

8. Regulations and legislation relevant to this unit standard include the following:
- Labour Act, No. 6, 1992
 - Occupational Health and Safety Regulations No. 18, 1997
- and all subsequent amendments.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Plan and prepare for work

Range

Planning and preparation may include but is not be limited to workplace inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements.

Performance Criteria

- 1.1 Drawings and specifications are obtained, read and interpreted in line with workplace procedures.
- 1.2 Safety requirements associated with installing and adjusting water service controls and devices, and the workplace environment, are adhered to throughout the work.
- 1.3 Quality assurance requirements are identified and adhered to in line with workplace procedures.
- 1.4 Tasks are planned and sequenced in conjunction with others involved in or affected by the work in line with workplace procedures.
- 1.5 Tools and equipment for installing and adjusting water service controls and devices, including personal safety equipment, are selected and checked for serviceability in line with workplace procedures.
- 1.6 Work area is prepared to support the efficient installing and adjusting of water service controls and devices in line with workplace procedures.

Element 2: Identify installation requirements

Performance criteria

- 2.1 Service design requirements are identified from job specifications and in line with workplace procedures.
- 2.2 Service controls and mixing devices are selected in line with standards, authorities' requirements and job specifications.
- 2.3 Available pressure and number of fixtures are determined from job specifications.
- 2.4 Valve size is selected in line with regulations, job specifications, manufacturers' specifications and design data.
- 2.5 Materials and equipment are identified and ordered/collected in line with workplace procedures.
- 2.6 Materials and equipment are checked for compliance with standards, docket/order form and for acceptable condition.

Element 3: Install and adjust devices

Performance criteria

- 3.1 Devices and mixing valves are positioned and installed in line with standards, job specifications, manufacturers' recommendations and authorities' requirements.
- 3.2 Pipework is flushed in line with workplace procedures.
- 3.3 Devices are commissioned and maintained to ensure correct flow operation in line with standards, manufacturers' and job specifications.
- 3.4 Customer is advised for correct operation of flushing devices, control valves appliances and pumps inline with workplace procedures.

Element 4: Clean up work area

Performance criteria

- 4.1 Work area is cleared and materials are disposed of or recycled in line with workplace procedures.
- 4.2 Tools and equipment are cleaned, checked, maintained and stored in line with manufacturers' recommendations and workplace procedures.
- 4.3 Documentation is completed in line with workplace procedures.

Registration Data

Subfield:	General Construction
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