

## CPC32408 Certificate III in Plumbing

This qualification provides a trade outcome in plumbing.

Occupational titles may include:

- Plumber
- Plumber and drainer
- Plumber and gasfitter
- Gasfitter
- Roof plumber.

The qualification has compulsory and elective unit of competency requirements that cover common and specialist skills for the plumbing industry in six specialist streams:

Stream 1 Water

Stream 2 Sanitary

Stream 3 Drainage

Stream 4 Mechanical services

Stream 5 Roofing

Stream 6 Gas services.

The plumbing industry strongly affirms that training and assessment leading to recognition of skills must be undertaken in a real or very closely simulated workplace environment and this qualification requires all units of competency to be delivered in this context.

Completion of the general induction training program specified by the National Code of Practice for Induction Training for Construction Work (SAC 2006) is required before entering a construction work site. Achievement of unit CPCCOHS1001A covers this requirement.

### Packaging rules

Units of competency from a minimum of four of the following six plumbing streams are required for award of this qualification.

Stream 1 Water and Stream 2 Sanitary are mandatory.

The following units of competency are required for award of this qualification:

Stream 1 Water (mandatory): 23 compulsory units and 6 elective units from the water stream *and* Stream 2 Sanitary (mandatory): 6 compulsory units and 4 elective units from the sanitary stream.

Plus two of the following four streams:

Stream 3 Drainage: 9 compulsory units and 3 elective units from the drainage stream

Stream 4 Mechanical services: 4 compulsory units and 11 elective units from the mechanical services stream

Stream 5 Roofing: 8 compulsory units and 4 elective units from the roofing stream

Stream 6 Gas services: 12 compulsory units and 5 elective units from the gas services stream

NB: Units of competency achieved in one stream count as credit for the same unit in the compulsory or elective requirements for any other stream.

**Compulsory units***Water stream*

CPCPCM2001A	Work effectively in the plumbing and services sector
CPCPCM2002A	Carry out interactive workplace communication
CPCPCM2003A	Carry out OHS requirements
CPCPCM2004A	Read plans and calculate plumbing quantities
CPCPCM2005A	Handle and store plumbing materials
CPCPCM2006A	Use plumbing hand and power tools
CPCPCM2007A	Carry out levelling
CPCPCM2010A	Mark out materials
CPCPCM2011A	Apply first aid in the workplace
CPCPCM2012A	Weld using oxy-acetylene equipment
CPCPCM2013A	Weld using arc welding equipment
CPCPCM2014A	Carry out simple concreting and rendering
CPCPCM3001A	Flash penetrations through roofs and walls
CPCPCM3002A	Weld plastic pipe using fusion method
CPCPCM3003A	Fabricate and install non-ferrous pressure piping
CPCPFS3001A	Fabricate and install fire hydrant and hose reel systems
CPCPCM2015A	Work safely on roofs
CPCPWT3001A	Set out and install water services
CPCPWT3002A	Install and adjust water service controls and devices
CPCPWT3003A	Install and commission water heating systems
CPCPWT3005A	Install water pump sets
CPCPWT3006A	Fit off and commission hot and cold water services
CPCPWT3007A	Connect irrigation systems from drinking water supply

*Sanitary stream*

CPCPCM2008A	Cut and join sheet metal
CPCPDR2001A	Locate and clear blockages
CPCPSN3001A	Plan layout of a residential sanitary plumbing system

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CPCPSN3002A	Install discharge pipes
CPCPSN3003A	Fabricate and install sanitary stacks
CPCPSN3004A	Install and fit off sanitary fixtures

*Drainage stream*

CPCPDR2001A	Locate and clear blockages
CPCPDR2002A	Install domestic treatment plants
CPCPDR2004A	Install stormwater and sub-soil drainage systems
CPCPDR2005A	Drain work site
CPCPDR2006A	Install prefabricated inspection openings and enclosures
CPCPDR3001A	Plan layout of a residential external sanitary drainage system
CPCPDR3002A	Install below ground sanitary drainage systems
CPCPDR3003A	Install on-site disposal systems
BCCCM2010B	Install trench support

*Mechanical services stream*

CPCPCM2008A	Cut and join sheet metal
CPCPMS2001A	Assemble mechanical services components
CPCPMS3001A	Fabricate and install steel pressure piping
CPCPMS3003A	Install small bore heating systems

*Roofing stream*

CPCPCM2008A	Cut and join sheet metal
CPCPRF2002A	Select and install roof sheeting and wall cladding
CPCPRF2003A	Collect and store roof water
CPCPRF3001A	Receive roofing materials
CPCPRF3002A	Fabricate and install roof drainage components
CPCPRF3003A	Fabricate and install external flashings
CPCPRF3004A	Install roof components
CPCPRF3006A	Install composite roof systems

*Gas services stream*

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CPCPCM2008A	Cut and join sheet metal
CPCPGS3001A	Install gas piping systems
CPCPGS3002A	Size consumer gas piping systems
CPCPGS3003A	Install and commission Type A gas appliances
CPCPGS3004A	Install LPG storage of aggregate storage capacity up to 500 litres
CPCPGS3006A	Install LPG systems in caravans, mobile homes, water craft and mobile workplaces
CPCPGS3007A	Install gas detection devices
CPCPGS3008A	Install gas pressure control equipment
CPCPGS3009A	Install Type A gas appliance flues
CPCPGS3011A	Purge consumer piping
CPCPGS3013A	Disconnect and reconnect Type A gas appliances
CPCPGS3014A	Calculate and install natural ventilation for Type A gas appliances

**Elective units***Water stream*

CPCCCM2008A	Erect and dismantle restricted height scaffolding
CPCCCM3001A	Operate elevated work platforms
CPCCPB3015A	Install acoustic and thermal environmental protection system
CPCCRI3001A	Operate personnel and materials hoists
CPC CST2005A	Carry out load slinging of off-site materials
CPCPCM2008A	Cut and join sheet metal
CPCPCM2009A	Cut using oxy-LPG-acetylene equipment
CPCPFS2001A	Connect static storage tanks for fixed fire protection systems
CPCPFS2002A	Install portable fire equipment
CPCPFS3003A	Fit off sprinkler heads, controls and ancillary equipment
CPCPFS3004A	Install control valve assemblies, actuating devices and local alarms
CPCPFS3008A	Test and maintain fire hydrant and hose reel installations
CPCPIG2001A	Design domestic urban irrigation systems
CPCPIG3001A	Set out, install and commission irrigation systems

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CPCPIG3002A	Install and commission domestic irrigation pumps
CPCPMS3001A	Fabricate and install steel pressure piping
CPCPMS3002A	Select and fit insulation and sheathing
CPCPMS3003A	Install small bore heating systems
CPCPMS3010A	Install and maintain evaporative air cooling systems
CPCPRF2003A	Collect and store roof water
CPCPWT3004A	Install and maintain domestic water treatment equipment
CPCPFS3007A	Install domestic and residential life safety sprinkler systems
CPCPWT3008A	Install water service
CPCPWT3009A	Install water pipe systems
BCCCM2010B	Install trench support
MEM05017C	Weld using gas metal arc welding process
MEM05019C	Weld using gas tungsten arc welding process
RTE3605A	Troubleshoot irrigation systems

*Sanitary stream*

BCCCM2010B	Install trench support
CPCCCM2008A	Erect and dismantle restricted height scaffolding
CPCCCM3001A	Operate elevated work platforms
CPCCPB3015A	Install acoustic and thermal environmental protection systems
CPCCRI3001A	Operate personnel and materials hoists
CPCST2005A	Carry out load slinging of off-site materials
CPCPCM2009A	Cut using oxy-LPG-acetylene equipment
CPCPDR2002A	Install domestic treatment plants
CPCPDR2003A	Maintain effluent disinfection systems
CPCPDR2004A	Install stormwater and sub-soil drainage systems
CPCPDR2005A	Drain work site
CPCPDR2006A	Install prefabricated inspection openings and enclosures
CPCPDR3002A	Install below ground sanitary drainage systems
CPCPDR3003A	Install on-site disposal systems

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CPCPMS3002A	Select and fit insulation and sheathing
CPCPSN3005A	Install pre-treatment facilities
CPCPSN3006A	Install sewerage pump sets

*Drainage stream*

CPC CST2005A	Carry out load slinging of off-site materials
CPCPCM2008A	Cut and join sheet metal
CPCPCM2009A	Cut using oxy-LPG-acetylene equipment
CPCPDR2003A	Maintain effluent disinfection systems
CPCPWT3009A	Install water pipe systems
CPCPSN3005A	Install pre-treatment facilities

*Mechanical services stream*

CPCCCM2008A	Erect and dismantle restricted height scaffolding
CPCCCM3001A	Operate elevated work platforms
CPCCPB3015A	Install acoustic and thermal environmental protection systems
CPCCRI3001A	Operate personnel and materials hoists
CPC CST2005A	Carry out load slinging of off-site materials
CPCPCM2009A	Cut using oxy-LPG-acetylene equipment
CPCPMS3002A	Select and fit insulation and sheathing
CPCPMS3004A	Install medical gas pipeline systems
CPCPMS3005A	Install and test ducting systems
CPCPMS3006A	Install air handling units
CPCPMS3007A	Install and test split system air conditioning
CPCPMS3008A	Install air conditioning control equipment
CPCPMS3009A	Maintain mechanical services equipment
CPCPMS3010A	Install and maintain evaporative air cooling systems
CPCPRF3003A	Fabricate and install external flashings
BCCCM2010B	Install trench support
MEM05017C	Weld using gas metal arc welding process
MEM05019C	Weld using gas tungsten arc welding process

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MEM10009B	Install refrigeration and air conditioning plant and equipment
MEM10010B	Install pipework and pipework assemblies
MEM18086B	Test, recover, evacuate and charge refrigeration systems

*Roofing stream*

CPCCCM2008A	Erect and dismantle restricted height scaffolding
CPCCCM3001A	Operate elevated work platforms
CPCCPB3015A	Install acoustic and thermal environmental protection systems
CPCCRI3001A	Operate personnel and materials hoists
CPC CST2005A	Carry out load slinging of off-site materials
CPCPCM2009A	Cut using oxy-LPG-acetylene equipment
CPCPRF2004A	Fabricate roof coverings for curved structures
CPCPRF3005A	Install roof coverings to curved roof structures
BCCCM2010B	Install trench support
MEM05017C	Weld using gas metal arc welding process
MEM05019C	Weld using gas tungsten arc welding process

*Gas services stream*

CPCCCM2008A	Erect and dismantle restricted height scaffolding
CPCCCM3001A	Operate elevated work platforms
CPCCRI3001A	Operate personnel and materials hoists
CPC CST2005A	Carry out load slinging of off-site materials
CPCPCM2009A	Cut using oxy-LPG-acetylene equipment
CPCPGS3005A	Install LPG storage of aggregate storage capacity exceeding 500 litres and less than 8KL
CPCPGS3010A	Install Type B gas appliance flues
CPCPGS3012A	Maintain Type A gas appliances
CPCPGS3015A	Install subsidiary gas meters
CPCPMS2001A	Assemble mechanical services components
CPCPMS3001A	Fabricate and install steel pressure piping
CPCPMS3003A	Install small bore heating systems

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CPCPMS3005A	Install and test ducting systems
CPCPMS3006A	Install air handling units
BCCCM2010B	Install trench support
MEM05017C	Weld using gas metal arc welding process
MEM05019C	Weld using gas tungsten arc welding process



## Employability Skills for CPC32408 Certificate III in Plumbing

The following table contains a summary of the employability skills for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on the packaging options.

### Employability Skill Communication

#### Industry/enterprise requirements for this qualification include:

- Communicates with clients, colleagues and others using effective and appropriate communication techniques, including:
  - Clear and direct communication
  - Active listening
  - Verbal and non-verbal language
  - Questioning to identify and confirm requirements
  - Language and concepts appropriate to cultural differences
- Follow instructions from supervisor and others
- Understands, interprets and applies information as required from relevant:
  - Regulatory, legislative, licensing and organisational requirements
  - Environmental and OHS requirements, including material safety data sheets
  - Codes and standards
  - Plans, drawings and specifications
  - Schedules
  - Load tables
  - Designs
  - Safety signs and symbols
  - Organisational policies and procedures
- Understands relevant definitions, terminology, symbols, abbreviations and language
- Uses industry-accepted visual communications, including hand signals
- Reports and records routine workplace and regulatory information including test data
- Applies measurements and calculations using appropriate equipment, formulas and records as required
- Reports and records hazards and risks

### Teamwork

- Works as part of a team
- Provides assistance and encouragement to other team members
- Initiates and encourages improvements in team performance
- Works with others to plan and sequence tasks
- Identifies and utilises the strengths of other team members
- Relates to people from diverse social, cultural and ethnic backgrounds and with varying physical and mental abilities
- Participates in workplace meetings

### Problem solving

- Responds effectively to hazards, risks, emergencies and

first aid situations

- Examines tools and equipment prior to use for damage, missing components or other defects
- Identifies typical faults and problems and takes remedial actions and/or reports to supervisor
- Performance tests penetration to ensure correct fit and remedies as required
- Rectifies simple faults with tools and equipment
- Locates and clears plumbing blockages
- Tests systems and services
- Calculates water flow rates, ventilation requirements and gas storage capacity
- Rectifies incorrect roofing installations
- Assesses roof work site safety
- Locates and repairs gas leaks

### **Initiative and enterprise**

- Maximises use of resources by recycling, re-using or using appropriate disposal methods
- Responds to change and workplace challenges
- Designs domestic irrigation systems
- Designs and fabricates roof coverings
- Determines requirements for heating system installations, roof water storage, medical gas pipeline systems, appliance installations, flue installations, and gas piping system purging

### **Planning and organising**

- Prepares work area
- Identifies and obtains necessary documentation
- Collects, analyses and organises workplace information
- Selects and uses appropriate materials, tools and equipment
- Carries out site inspections
- Determines material quantity requirements and conformity to requirements
- Coordinates delivery of materials
- Fabricates, sets out, installs and commissions components, equipment and systems
- Plans drainage system layouts
- Prioritises and sequences tasks
- Applies time management skills to ensure work is completed to time requirements

### **Self management Learning Technology**