

INSTALL SANITARY APPLIANCES

UNIT CODE: CON/OS/PL/CR/02/3/A

Unit Description

This unit specifies the competencies required to install sanitary appliances. It involves interpreting drawings, quantifying appliances and supplies, fixing sanitary appliances as well as testing working sanitary appliances. It applies in the construction industry.

ELEMENTS AND PERFORMANCE CRITERIA

Element These describe the key outcomes which make up workplace function	Performance Criteria These are assessable statements which specify the required level of performance for each of the elements <i>Bold and italicized terms are elaborated in the Range</i>
1. Interpret working drawing	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> 1.1 Drawings are differentiated based on <i>type of drawing</i>. 1.2 The scale of the drawing is read based on the provided key. 1.3 Imperial measurements are converted in to metric measurements based on conversion table. 1.4 Symbols are identified based on internationally accepted codes 1.5 Isometric piping drawings are drawn based on internationally accepted codes.
2. Interpret manufacturers drawings	<ul style="list-style-type: none"> 2.1 Manufacturers drawing of sanitary appliances are interpreted as presented. 2.2 Assembling of sanitary appliances is done as per manufacturers' Instructions 2.3 Supply pipes are connected as per manufacturers' instructions
3. Quantify sanitary appliances	3.1 <i>Materials</i> required for fixing are identified based on requirements of the job.

	<p>3.2 Supplies required for fixing are identified based on manufacturers' instructions.</p> <p>3.3 Schedule of sanitary appliances is prepared based on the drawing.</p> <p>3.4 Tools and equipment needed for fixing appliances are selected based on the type of sanitary appliance instructions.</p>
4. Fix sanitary appliances	<p>4.1 Tools and equipment are used based manufacturer's instructions.</p> <p>4.2 Appliance positioning is determined based on working drawings.</p> <p>4.3 Support for sanitary appliances is put in place based on manufacturers' specifications</p> <p>4.4 Sanitary appliances are mounted based on manufacturer's installation manual.</p> <p>4.5 Quality checks and parameters are done in accordance to industry standards.</p> <p>4.6 Personal Protective Equipment is used in line with occupational safety and health regulations</p>
5. Test and commission working of sanitary appliances	<p>5.1 Functionality of the appliance is tested based on manufacturer's manual and requirements.</p> <p>5.2 Faults in appliance functionality and leakage are corrected based on manufacturers' procedures.</p> <p>5.3 The works are commissioned in accordance to job requirements</p>

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variables	Range
1. Materials may include but not limited to	<ul style="list-style-type: none"> • Screws • Adhesives • Cement • Sand

	<ul style="list-style-type: none"> • Pipes • Traps • Gutters • Electric cables • Caulking material
2. Tools and equipment may include but not limited to:	<ul style="list-style-type: none"> • Pipe wrench • Pipe cutter • Hacksaw • Pipe Threading Equipment • Vise - Bench • Tap and Punch • Files • Screwdrivers • Drill with various sizes of bits • Mallet • Ball hammer • Masonry chisel • PPR machine / Heat Fusion equipment • Pipe bender • Trowel
3. Personal Protective Equipment (PPE) include but not limited to:	<ul style="list-style-type: none"> • Hardhat • Gloves • Dustcover / overall • Safety shoes / boots
4. Types of appliances include but not limited to:	<ul style="list-style-type: none"> • Wash hand basin • Water closet • Bath tub • Urinal • Bidet • Kitchen sink • Jacuzzi • Shower head
5. Positioning include but not limited to:	<ul style="list-style-type: none"> • Standard positioning • Special positioning

6. Specifications include but not limited to:	<ul style="list-style-type: none"> • Manufacturer’s specifications • Engineer’s specifications • Client’s specifications
7. Faults include but not limited to:	<ul style="list-style-type: none"> • Installation faults • Manufacturer’s faults
8. Quality checks and parameters may include but not limited to:	<ul style="list-style-type: none"> • Levelness • Plumpness • Accuracy
9. Support may include but not limited to:	<ul style="list-style-type: none"> • Self-support • Provided support

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required Skills

The individual needs to demonstrate the following skills:

- Drawing and interpretation skills
- Problem-solving skills
- Critical-thinking skills
- Organizing skills
- Measuring skills
- Numeracy skills
- Cutting skills
- Threading skills
- Fusion skills
- Bending skills
- Quality of materials identification skills

Required knowledge

The individual needs to demonstrate knowledge of:

- Conversion of units
- Measurement

- Fusion
- Bending
- Mensuration
- Types of cloaking materials
- Types of valves
- Types of appliances
- Types of traps
- Testing
- Special appliances and
- New technologies

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

<p>1. 1. Critical aspects of competency</p>	<p>Assessment requires evidence that the Candidate:</p> <ul style="list-style-type: none"> 1.1 Interpreted working drawings correctly. 1.2 Positioned appliances based on specifications. 1.3 Installed functional appliances correctly. 1.4 Quantify materials, supplies and appliances accurately.
<p>2. Resource Implications</p>	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> 2.1 A functional workshop with basic tools, equipment and sanitary appliances. 2.2 Reference and appliance 2.3 manuals 2.4 Personal protective equipment
<p>3. Methods of Assessment</p>	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> 3.1 Observation. 3.2 Written test 3.3 Interview 3.4 Oral questioning 3.5 Project

4. Context of Assessment	Assessment may be done: 4.1 On-the –job 4.2 Off-the –job 4.3 During work placement
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector workplace and job role is recommended

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