

Stationary concrete placing boom – A72 Learning for CPCS



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Outcomes

Through a combination of targeted training and experience, an individual with the placing boom will be able to:

<p>Roles and responsibilities</p>	<ul style="list-style-type: none"> Describe the nature of the sector of industry and their role and responsibilities as a plant operator
<p>Preparing for work</p>	<ul style="list-style-type: none"> Name and explain the purpose of principal components, the basic construction, controls and terminology Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation Explain all relevant documentation Undertake all pre-use checks for the unit and associated pipe work Ensure unit stability and support
<p>Setting up for work</p>	<ul style="list-style-type: none"> Configure the placing boom for pumping duties Arrange and secure all pipes and lines Arrange, use and comply with communication procedures with the pump operator and at the pour point Explain actions required for proximity hazards, structures, and overhead services
<p>Working tasks</p>	<ul style="list-style-type: none"> Control and place materials accurately to the desired pour location Explain how blockages occur and give solution methods Maintain safe working situations
<p>Completing work</p>	<ul style="list-style-type: none"> Complete end-of use cleaning procedures
<p>Shutting down</p>	<ul style="list-style-type: none"> Carry out shut down and securing procedures

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Syllabus

Learning outcome	Training content	
<ul style="list-style-type: none"> Describe the nature of the sector of industry and their role and responsibilities as a plant operator 	<ul style="list-style-type: none"> Industry type Customer / client needs Sector contribution Role Communication with colleagues / management / other trades 	<ul style="list-style-type: none"> Lifelong skills Health and Safety at Work etc. Act Environmental issues Other trades Working practices Social responsibilities Reporting structures
<ul style="list-style-type: none"> Name and explain the purpose of principal components, the basic construction, controls and terminology 	<ul style="list-style-type: none"> Differing types Function and applications Power / hydraulic systems Stability Working ranges 	<ul style="list-style-type: none"> Booms configurations Safety systems Slewing arrangements Attachments Remote control units
<ul style="list-style-type: none"> Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation 	<ul style="list-style-type: none"> Operator's Manual Machine decals Health and Safety at Work etc. Act PPE Codes of Practice Working at height 	<ul style="list-style-type: none"> Site plans/drawings Method statements Risk assessments / COSHH Inspection and reporting forms / procedures
<ul style="list-style-type: none"> Explain all relevant documentation 	<ul style="list-style-type: none"> Test certificates 	<ul style="list-style-type: none"> Operator certification
<ul style="list-style-type: none"> Undertake all pre-use checks for the unit and associated pipe work 	<ul style="list-style-type: none"> Regular and non-scheduled maintenance procedures 	<ul style="list-style-type: none"> Sequence of pre-use checks Defect reporting
<ul style="list-style-type: none"> Ensure unit stability and support 	<ul style="list-style-type: none"> Floor frame wedges Ballast weights Bolt torques/tightness Back props 	<ul style="list-style-type: none"> Anchor bolts Clips Locking / securing methods
<ul style="list-style-type: none"> Configure the placing boom for pumping duties 	<ul style="list-style-type: none"> Stability Boom configurations Hazards Striking distance Placing hose 	<ul style="list-style-type: none"> Boom controls Site markings Environmental considerations Pump-able mixtures

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Syllabus (continued)

Learning outcome	Training content	
<ul style="list-style-type: none"> • Arrange and secure all pipes and lines 	<ul style="list-style-type: none"> • Supporting piping / hoses / boom • Creating pipelines 	<ul style="list-style-type: none"> • Securing types and methods • Hazards and defects
<ul style="list-style-type: none"> • Arrange, use and comply with communication procedures with the pump operator and pour team 	<ul style="list-style-type: none"> • Methods and types of signals • Methods of instruction • Radio protocol 	<ul style="list-style-type: none"> • Electronic communication / setting-up procedures • Codes of Practice
<ul style="list-style-type: none"> • Explain actions required for proximity hazards, structures, and overhead services 	<ul style="list-style-type: none"> • Types of proximity services • Types of proximity hazards • Warning / identification systems 	<ul style="list-style-type: none"> • Reporting procedures for damage to services • Minimum distances and clearances
<ul style="list-style-type: none"> • Control and place materials accurately to the desired pour location 	<ul style="list-style-type: none"> • Flow rates • Signalling / communication procedures • Visibility • Operator positioning • Working platforms 	<ul style="list-style-type: none"> • Flow controls • Working efficiently • Hazards • Environmental considerations
<ul style="list-style-type: none"> • Explain how blockages occur and give solution methods 	<ul style="list-style-type: none"> • Type of blockages • Communication of blockages • Shut-down and re-starting methods • Cleaning procedures 	<ul style="list-style-type: none"> • Cleaning methods • Components subject to blockages • Hazards • Environmental considerations
<ul style="list-style-type: none"> • Maintain safe working situations 	<ul style="list-style-type: none"> • Stability • Visibility 	<ul style="list-style-type: none"> • Pipe / hose security • Hazards
<ul style="list-style-type: none"> • Complete end-of use cleaning procedures 	<ul style="list-style-type: none"> • Components • Cleaning equipment • Cleaning area • Methods and procedures 	<ul style="list-style-type: none"> • Hazards • Environmental considerations / waste disposal • Communication
<ul style="list-style-type: none"> • Carry out shut down and securing procedures 	<ul style="list-style-type: none"> • Shut down procedures • Security 	<ul style="list-style-type: none"> • Folded positions • Storing • Isolation

Note: The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

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Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> • Cleaning procedures 	<ul style="list-style-type: none"> • Planned and controlled use of cleaning balls and the very high risks of using compressed air
<ul style="list-style-type: none"> • Cleaning methods 	<ul style="list-style-type: none"> • Compressed air not to be used unless fully trained and supervised by a competent person following a specific risk assessment
<ul style="list-style-type: none"> • Blockages 	<ul style="list-style-type: none"> • Pressure releasing procedures and the dangers of excessive pressure
<ul style="list-style-type: none"> • Working at height 	<ul style="list-style-type: none"> • Procedures for accessing working areas

Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> • Novice operators with no industry or machine or boom experience 	35
<ul style="list-style-type: none"> • Novice operators with industry experience but no boom experience 	21
<ul style="list-style-type: none"> • Operators with pumping machine experience 	14
<ul style="list-style-type: none"> • Operators with boom pumping experience 	7
<p>All candidates must have received the equivalent to 7 hours of site safety and induction training</p>	

To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category

2 candidates : 1 boom: 1 instructor

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Resources

Practical equipment	Theory equipment
<ul style="list-style-type: none"> • Placing boom that meets current legislation • Operator’s manual for the unit • Concrete pump • Relevant pipelines • Materials able to be pumped <p>PLUS</p> <ul style="list-style-type: none"> • Suitable PPE • Risk assessment for all areas where training is occurring 	<ul style="list-style-type: none"> • PUWER 1998 Regulations • LOLER 1998 Regulations • HSE GS6 • Operator’s Manual • Specifications for types of concrete pumps and placing booms • CPA Best Practice Guide for the Safe Use of Concrete Pumps <p>PLUS</p> <ul style="list-style-type: none"> • Suitable room for theory training purposes • Welfare and rest facilities during training

Category

Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer’s basic design. Although this category can have varying uses within industry, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical placing boom would normally have the listed features and be used within the described characteristics. This category has two endorsements.

Category features	Category characteristics
<ul style="list-style-type: none"> • Multi-knuckled foldable boom with attached pipe work able to slew through 360 degrees • Hydraulically operated through electrically-driven motor • Supported on a variety of platforms or coupled to a structure 	<ul style="list-style-type: none"> • Delivers pumped materials to given pour locations from minimum to maximum radius

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Endorsements

Endorsement characteristics

- **Endorsement A:** Up to 13 metres
- **Endorsement B:** All sizes