

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	<p>Crane Bridge The Crane Bridge shall comprise double girders made of steel box-section design and the steel structure shall be to DN15018 or equivalent approved standard. After fabrication, the steel parts shall be cleared and protected against rust by applying a Zinc-chromatic primer. The box girder shall be so constructed to eliminate any possibility of accumulation of water or oil inside them. The gantry shall be of sufficient strength to withstand the dynamic and elastic loads of the crane and to be DIN 536 or other approved equivalent. The end carriages shall also be to DIN 15018 or equivalent approved standard.</p>	1	item		
B	<p>Run-way Structure The run-way shall be composed of rails for the crab on the crane bridge and rails on the beam surface. The bridge rails shall be mounted securely on top of the gantry girders and crane rails on the reinforced beams provided by others. The rails shall be mild steel amply treated against corrosion; flat bars fixed to the girder/beam channel and shall weigh 75.2kg per metre. The rails on the gantry girders shall be ST- 53 steel joined together smoothly. The bridge rails of approved section shall be provided for the crab to travel on and shall be fitted with end stops.</p>	1	Item		
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A	<p>Control cabin</p> <p>Supply, install and commission a suitable cabin with glass wall to have 360° view. The cabin shall be manufactured to be intergrated with the overhead gantry crane and provide aerial control of gantry motion. The controls are such that an over ride over the pendant controls. The operator shall sit and have foot rest made of chequered GRP plates. All to be as approved by the Engineer.</p>	1	No.		
B	<p>10 Ton Gantry</p> <p>Supply, install and commission a 10 ton overhead electric traveling crane in the automotive workshop. It shall comply with the following tender specifications.</p> <ul style="list-style-type: none"> -Hoisting capacity 10.0 tons (10,000kg) -Span 20.0m -Lifting speed 3m/min -Cross travel speed 12m/min -Long travel speed 16m/min -Lifting height 8.0m <p>The crane shall be constructed for double girder span beam welded box girder type and controlled via a suspended push button pendant mobile along the crane bridge and independent of thee position of the load. The crane shall be suitable for control voltage of 240 V, single phase and mains voltage of 415 V, three phase 50 HZ. The hoist unit to be as “KONE UN 1441 NG” or other approved equivalent.</p>	1	No		
C	<p>Rope Drum & Wire Ropes</p> <p>The rope drum shall be designed to withstand compressive stresses caused bya the ropes wound on it and bending stress due to action of the drum. The wire ropes shall be in stainless steel and of reputable make preferably "Hyflex" with a tensile strength of 200 kg/mm²</p>	1	Item		
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A	<p>Sub-total carried forward from previous page</p> <p>Lifting Hooks the hooks shall be standard plain shank type trapezoidal section solid forged and heat treated. The hooks shall have swivels and operate on thrust bearings with hardened races. All to the Engineers approval.</p> <p>Power surge protectors</p>	2	No.		
B	<p>All equipment and all their controls shall be protected against voltage/power fluctuation, surges and transient currents. The contractor shall provide for and install all the necessary equipment for this protection</p> <p>Control Panel</p>	1	item		
C	<p>All power and aux contactors shall be mounted in CRCA steel sheet cubical with lockable hinged doors. The door hinge shall be such that during repair works inside the panel the entire door can be lifted out. The panel shall be compartmentalised to allow for separate compartment for each motion. The panel shall be front wired with readily accessible terminal blocks. All equipment inside the panel shall have permanent identification labels in accordance with the circuit diagram as also the power and control terminals. The panel shall be dust/vermin proof and provided with CFL luminaries for interior illumination. The panel to be as manufactured by Powertechnics or an approved equivalent.</p>	1	No.		
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Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
A	<p>Sub-total carried forward from previous page</p> <p>Electrical Works</p> <p>All accessories and auxiliary electrical equipment shall be fixed by registered electrician. The scope of electrical works shall include but not limited to;</p> <ul style="list-style-type: none"> - fixing LED type Indicating and sound alarms with sufficient dB - fixing Shrouded down shop leads and mains current collectors - fixing Motors, motor controls and protective switches. - fixing double step push button pendant controls and 2No. Wireless remote controls having 100m range as SIEMENS. - fixing 3No. 250W metal Halide luminaries under the crane, operable from the pendant as well as from the wireless remote control. - fixing safety switches of sustained contact type at each end of the crane bridge and one emergency button on the pendant control. <p>Working Drawings</p> <p>Allow for working drawings, calculations and printed catalogues, well bound in hard cover (3No. copies of each in A1 or A0 paper size in scale1: 25, 1:50 1:100 as appropriate for all compressed air installations. The soft copies in AutoCAD latest release format to above scales – drawings to incorporate all aspects of mechanical perspectives and be stored in a 4GB USB flash disk and a compact dick (CD).</p>	1	item		
B		1	Item		
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A	<p>As-installed Drawings Allow for as-installed drawings, operation and maintenance manuals, well bound in hard cover (3No. copies of each in A1 or A0 paper size in scale: 1:25, 1:50 1:100 as appropriate for all compressed air installations. The soft copies in AutoCAD latest release format to above scales – drawings to incorporate all aspects of mechanical perspectives and be stored in a 4GB USB flash disk and a compact disk (CD).</p>	1	Item		
B	<p>Factory Inspection The equipment shall be tested by a certified factory inspector who shall issue an inspection certificate.</p>	1	No.		
C	<p>Testing and Commissioning Allow for setting to work, testing and commissioning of all the compressed air installations to the satisfaction of the Project Engineer.</p>	1	Item		
D	<p>SPARES The sub-contractor MUST provide a list of standard spares, sufficient for 5 years normal operation. The prices of the same shall be quoted separately and client will purchase later on at their own discretion.</p>	1	Item		
E	List of Spares for 5yrs normal running:				
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