



An Roinn Oideachais
Department of Education

Engineering

Equipment List, Specifications and Tendering Guidance

Tendering Guidance

Important Notes to School's /ETB's seeking the items from this list:

1. Utilise existing procurement arrangements with suppliers/service providers where available
2. Search www.ogp.gov.ie to check if there is a suitable, fit for purpose framework/contract in place for all or some of the items required.
3. Choose to seek a request for quotation (RFQ), below the value of 25k, or a request for tender (RFT), above the value of 25k, based on best value for money using both qualitative and cost criteria. All procurement over the value of €25,000 must be advertised and published on www.etenders.gov.ie.
4. Seek quotations based on the items that can be competitively quoted from multiple suppliers based on the estimated level of spend following the procurement guidelines. For more advice on the procurement guidelines contact the Schools Procurement Unit (www.spu.ie) or Education Training Board with whom you are associated (list of ETBs on www.etbi.ie).
5. Suppliers may not be able to provide the full range of goods listed. In this case they should be requested to quote only for sections where they can supply all items in that section (excluding the equipment where a framework is in place such as ENG/B/201).
6. The specifications outlined in this document have been reviewed to ensure products of the highest quality are supplied. Substandard equipment should not be proposed or accepted under any circumstances and suppliers should be asked to replace these to the same standard set out or higher. Schools are advised to check this as part of the assessment before finalising the overall scores. In addition to pricing each item, suppliers must also specify the warranty being offered for each item.
7. All quotations must be excluding VAT with the VAT highlighted separately.
8. Contact the School Procurement Unit or your ETB for further specific guidance.

Engineering Equipment List A

Section 1: Drawing and Design

| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
|--------------------|---|-----------------------------------|
| ENG/A/101 1 | Set of (magnetic) drawing equipment, for (magnetic) chalkboard, to include (i) compass with steel point (500mm), (ii) 60°/30° set square (500mm), (iii) 45° set square (500mm), (iv) protractor (425mm) and (v) heavy duty rule with bevelled edges (1000mm). | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/102(A) 25 | T-squares: A2 size, tape blade, best quality hardwood, with maple or acrylic edges to blade; blade screwed and dowelled to stock or equal. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| OR | | |
| ENG/A/102(B) 25 | Stainless steel T-square with fixed light cast aluminium head, brushed blade with low reflectance. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/103 25 | Portable Desktop Drawing Board, A2 size, solid core/particle board/multi-ply, white high pressure laminate above and below, PVC edges and square corners, with rubber feet. Simple robust mechanism to allow use at 0° and 20°, with rubber tractor grip to facilitate overhanging of table edge. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/104 25 | Graphics/DCG wooden box set, to come with 4" acrylic protractor, 60°/30° & 45° Set Squares (transparent heavy duty, non-brittle plastic, with bevelled edge and open centre. Sizes: 200mm, 2mm thick), quick-set adjustable compass, H and 2H pencils, Vinyl eraser, Metal sharpener and Clips. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/105 1 | Combination set, with centre head, square head, protractor and 300mm rule. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/106 24 | Scaled rule, acrylic, 300mm, suitable for graphics/drawing | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/107 25 | Engineers stainless steel rule, pearl chrome finish, 300mm long, graduated in-mm. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/108 25 | Engineers stainless steel rule, pearl chrome finish, 150mm long, graduated in-mm. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/109 1 | Flexi-curve, suitable for technical graphics work. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/110 1 | French curves, set of three, moulded plastic with ellipse form. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/111 1 | Erasing shield, stainless steel type. | |
| | Manufacturer: _____ Catalogue No.: _____ | |

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| ENG/A/112 1 | 50 m Surveyor's Fibre Measuring Tape. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/113 25 | Cutting knife, scalpel type with disposable blades. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/114 25 | Cutting mat, A3 size, plastic, self-repairing. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/115 25 | Show-me boards, A3 size, gridded, with dry wipe pens and eraser. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/116 2 | Scissors 250mm stainless steel. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/117 24 | Scissors 140mm | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/118 1 | Spray mount 400ml. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/119 6 of each | Ready mixed water-soluble paint 500ml (red, green, brown, black, blue, yellow, white). | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/120 10 | White foam board 3mm thick, 70x100cm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/121 1 | 5 m Pocket Measuring Tape with 19mm blade. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/122 12 | Glue guns and 100 glue sticks. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/123 1 | Electronic Label maker, complete with tapes. | | |
| | Manufacturer: | Catalogue No.: | |

| Section 2: General Workshop Equipment and Tools | | |
|---|---|-----------------------------------|
| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
| ENG/A/2001 24 | Engineer's bench vice, cast iron with c.100-125mm steel jaws. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2002 24 | Pair of fibre grips for ENG/A/201. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2003 24 | Engineers ball pein hammer, weight c.500g min., 10 year warranty, | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2004 1 | Claw hammer, tempered/hardened head, wood/metal handle, 500 g (1 lb). | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2005 4 | Carpenters mallet, c.115mm, min. 10 year warranty. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2006 24 | Engineers steel try square, blade 120mm min. (min. 10 year warranty) | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2007 2 | Woodwork try-square, blade length: 150mm min. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2008 24 | Engineers spring dividers, c.100-150mm. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2009 24 | Engineer's fully integrated scribe, double ended, c.175mm. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2010 24 | Engineers centre punch, c.100mm. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2011 12 | Engineer's jenny callipers, c.125mm, firm friction joint, adjustable point. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2012 12 | Chisel, flat, c.150mm long. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2013 24 | Hacksaw frame, 300mm, adjustable or fixed type. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2014 24 | Junior hacksaw frame and blades, Strong epoxy frame; spring steel blade with precision blade teeth. min. 10 year warranty | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2015 6 | Tenon saw, c.250mm - 300mm, stiffening rib, min. 10 year warranty. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2016 24 | Hand file, 250mm long, smooth grade, double cut. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2017 24 | Hand file, 250mm long, bastard grade, double cut. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2018 24 | File card (wooden base type), c.100mm x 50mm. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2019 5 | Universal bevel protractor, c.150mm blade. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/2020 6 | Surface plate, c.200mm-300mm square or rectangular, machined surfaces. | |
| | Manufacturer: Catalogue No.: | |

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| ENG/A/2021 4 | V-block and clamp, min. clamping capacity 25mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2022 2 | Centre square, capacity 40-50mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2023 2 | Toolmaker's clamp, c.100mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2024 6 | Height gauge 300mm, adjustable reference point, carbide tipped offset scriber, accuracy +/- 0.03mm, 3 year warranty. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2025 4 | Precision vernier caliper, capacity c.150mm, digital reading. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2026 4 | Precision micrometer, capacity 0-25mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2027 1 | Internal micrometer set. Capacity: c.25-55mm complete with extension rods, spacing collar and fitted case: accuracy 0.01mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2028 1 | Vernier depth gauge, c.150mm blade, reading 0.02mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2029 1 | Precision micrometer, capacity 25-50mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2030 1 | Universal dial test indicator, dial graduated to read 0.01mm. Range c.8mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2031 1 | Magnetic base holder for dial test indicator. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2032 1 | Set of telescopic gauges, complete with case. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2033 1 | Slotted angle plate, size: c. 113mm x 88mm x 75mm – open-ended type. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2034 1 | Feeler gauge, metric, e.g., 10 blades – 0.05mm-0.08mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2035 1 | Radius gauge, metric. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2036 5 | Drill gauge, e.g., 0.5mm to 12mm x 0.5mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2037 1 | Screw pitch gauge, ISO forms, metric. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2038 4 | Engineer's outside spring caliper, c.100-150mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2039 4 | Engineer's inside spring caliper, c.100-150mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2040 1 | Wire gauge, 1-36 swg (0.19 – 7.6mm). | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2041 4 | Set(s) of assorted flat and Philips head screwdrivers with plastic handles. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2042 4 | Combination pliers, c.200mm. | | |
| | Manufacturer: | Catalogue No.: | |

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| ENG/A/2043 4 | Heavy-duty electricians pliers with insulated handles, c.150mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2044 2 | Slip joint pliers, chrome finish, c.230mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2045 2 | Flat nose pliers, c.160mm, insulated handles. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2046 2 | Round nose pliers, c.160mm, insulated handles. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2047 4 | Vice grips, c.250mm, lever release. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2048 2 | Sheet-metal vice grips, c.250mm, lever release. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2049 4 | Hand vice, spring type, c.100mm length. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2050 2 | Adjustable spanner, chrome finish, c.200mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2051 2 | Set, combination spanners (ring/open jaw ended), metric: e.g., 6 x 7 to 18 x 19, chrome finish. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2052 1 | Set of bi-hex sockets and accessories (metric: e.g., 10 to 32 x 2mm). | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2053 2 | Set of allen keys, e.g., 3mm - 10mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2054 1 | Riveting tool set, to include, snap, set and bolster to suit 3mm rivets. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2055 1 | Riveting tool set, to include, snap, set and bolster to suit 5mm rivets. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2056 1 | Riveting tool set, to include, snap, set and bolster to suit 6mm rivets. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2057 1 | Pop riveting kit, complete with pliers and assorted rivets, industrial grade. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2058 3 | Set of number stamps, 3mm, set of 9, Grade A. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2059 3 | Set of number stamps, 5mm, set of 9, Grade A. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2060 2 | Set of letter stamps, 3mm, set of 27, Grade A. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2061 2 | Set of letter stamps, 5mm, set of 27, Grade A. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2062 1 | Set of pin punches, e.g., 1.5mm to 8mm, c.100-150mm long. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2063 4 | Set of stocks, dies, taps and wrenches, ISO thread form, e.g., 6mm to 12mm x 1mm. Circular die pattern. Set complete in strong case. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2064 2 | Hand held engraver, variable speed. | | |
| | Manufacturer: | Catalogue No.: | |

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| ENG/A/2065 6 of each set | Set of five taps (taper, second and plug) for screw cutting 3mm, 4mm, 5mm, 6mm and 8mm ISO. min. 10 year warranty. | | |
| | Adjustable tap wrench to suit. | | |
| ENG/A/2066 6 of each set | Circular dies for screw cutting 3mm, 4mm, 5mm, 6mm and 8mm ISO. | | |
| | Stock to suit above dies. | | |
| ENG/A/2067 6 | Min. ten year warranty. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2068 1 | Set of drills, HSS, parallel shank, 1.0 to 13mm x 0.5mm. Set in case. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2069 3 | Set of drills, HSS, M.T. shank, 14 to 25mm x 1mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2070 2 | Set of counter sink drills, HSS, 6, 8, 10mm. Parallel shank 90°. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2071 2 | Set of c.5 hole-saws, complete with arbor, sizes from c.20mm to c.60mm diameter. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2072 1 | Set of combination centre drills, HSS, No. 1, 2, 3, 4, 5, 6, and 7. 60° angle (Slocomb). | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2073 1 | Morse-taper sleeves, 3-2, 2-1. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2074 2 | Parallel machine reamers, parallel shank, e.g., 6 to 12 x 2mm steps. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2075 2 | Crosscut chisel, c.150mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2076 2 | Round nose chisel, c.150mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2077 2 | Diamond point chisel, c.150mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2078 2 | Miniature side cutter pliers, spring leaf mechanism, c.150mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2079 4 of each size | Miniature top cutter pliers, spring leaf mechanism, c.150mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2080 4 of each size | Chisels (firmer): min. 10 year warranty. 6mm 10mm 18mm | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2081 2 | Chisels (bevel): min. 10 year warranty. 6mm 10mm 18mm | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2081 2 | Bench plane, smooth, 50mm cutter, adjustable for depth of cut/alignment. | | |
| | Manufacturer: | Catalogue No.: | |

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| ENG/A/2082 6 | Cast iron bench blocks, rough machined on one face, c. 250mm x c.200mm x c.50mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2083 1 | Quarter litre manual pump oiler | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2084 1 | Combination oilstone, c.200mm, coarse and fine faces. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2085 1 | Engineers steel try square, blade length 200-250mm. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2086 24 | Hand files – 200mm bastard. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2087 24 | Hand files – 200mm smooth. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2088 24 | Hand files – 150mm bastard. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2089 24 | Hand files – 150mm smooth. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2090 24 | Half-round files – 250mm smooth. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2091 24 | Half round files – 250mm bastard. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2092 24 | Half round files – 150mm smooth. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2093 24 | Half round files – 150mm bastard | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2094 24 | Round files – 200mm smooth. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2095 24 | Round files – 200mm bastard. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2096 24 | Round files – 150mm smooth. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2097 24 | Round files – 150mm bastard. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2098 24 | Square files – 200mm smooth. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2099 24 | Square files – 200mm bastard. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2100 24 | Square files – 150mm smooth. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2101 24 | Square files – 150mm bastard. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2102 24 | Three-square files – 200mm smooth. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2103 24 | Three-square files – 200mm bastard. | | |
| | Manufacturer: | Catalogue No.: | |

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| ENG/A/2104 24 | Warding files - 150mm smooth. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2105 24 | Warding files - 150mm bastard. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2106 6 | Piercing saw frames. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2107 24 | Pack of blades for item ENG/A/2108. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2108 90 | File handle for 250mm file, plastic or wooden. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2109 200 | File handle for 200mm file, plastic or wooden. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2110 240 | File handle for 150mm file, plastic or wooden. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2111 200 | Hacksaw blade, 300mm, 24 T.P.I. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2112 4 | Set of c.6/12 assorted needle files. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/2113 200 | Hacksaw blade junior type. | | |
| | Manufacturer: | Catalogue No.: | |

| Section 3: Power Tools | | |
|------------------------|---|-----------------------------|
| Code Quantity | Description and Specification <i>Note: Portable Tools to be supplied as cordless appliances only</i> | Cost (€) & Warranty Offered |
| ENG/A/301 2 | Rechargeable, minimum 18 V, Portable Cordless Drill with case, to include charger and two batteries. <i>Two year warranty.</i> | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/302 1 | Portable minimum 18 Volt Brushless Random Orbital Sander with outlet compatible with Dust Extractor, to include charger and two batteries. <i>Two year warranty.</i> | |
| | Manufacturer: _____ Catalogue No.: _____ | |

Section 4: Electronics and Control Technology

| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
|------------------|---|-----------------------------------|
| ENG/A/401 1 | Educational electronics teaching kit capable of allowing for the demonstration of a range (c.20) simple electronic circuits/systems such as fire alarm and motor controllers. Kit to be accompanied with associated guides/texts, and suitable for use with a class group of 24 students. Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/402 6 | Digital multi-meter, auto-ranging frequency measurement, capacitance measurement and transistor test. Voltage a.c and d.c – c.5 ranges each from 200 mV x 100 mV to 600 V x 1V Current a.c and d.c – c.4 ranges each from 2 mA x 1 mA to 10 x 10 mA Resistance – c.6 ranges from 200 R x 0.01 R to 20 M x 10 K Capacitance – c.5 ranges from 2000 pF x 1 pf to 20 mF 10 nF Frequency – c.5 ranges from 2 kHz x 1 Hz to 20 MHz x 100 kHz Diode test Continuity test Transistor test NPN and PNP Two year warranty. Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/403 25 | Handheld, programmable micro-computer Kit. Individually-programmable LEDs, 2 programmable buttons, Physical connection pins, Light and temperature sensors, Motion sensors (accelerometer and compass), Wireless Communication, via Radio and Bluetooth, USB interface. It should have the capability to be coded from any web browser in Blocks, Javascript, Python or Scratch. Kit to include USB connector, battery cage and protector case. Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/404 30 | All-in-one robotics board (for micro-computer specified in ENG/A/403). Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/405 30 | Straight single row PCB pin headers, 2.54mm, 36-way (for micro-computer specified in ENG/A/403). Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/406 30 | Edge connector breakout board (for micro-computer specified in ENG/A/403). Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/407 90 | Jumper Wires 20cm Male / Female . Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/408 90 | Alligator Clip with Pigtail (4 Pack). Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/409 60 | Right Angle Geared Hobby Motor. Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/410 60 | Linear Actuator kit. Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/411 1 | Sensors for air and weather, colour and light, and sound (for micro-computer specified in ENG/A/403). Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/412 60 | Mini 180 Degree Resin Gear Servo. Manufacturer: _____ Catalogue No.: _____ | |

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| ENG/A/413 2 | Wall mount storage units for the workshop, High grade polypropylene bins, 12x Small bins (75mm x 100mm x 110mm); 6x Medium bins (75mm x 100mm x 160mm); 6x Large bins (75mm x 100mm x 210mm) | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/414 1 | Move mini buggy kit (for micro-computer specified ENG/A/403). | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/415 10 of each | Pack/kit of accessories suitable for electronics work (i.e., push-fit directly to miniature motor shafts): Pack of c.10 plastic wheels, various diameter sizes (e.g., 30mm - 70mm) Pack of c.10 plastic propellers, c.100mm diameter, 2 or 3 blades. Pack of c.10 2mm steel shafting Pack of c.10 3mm steel shafting Pack of c.10 miniature pulleys, various diameter sizes (e.g., 8mm to 25mm) Pack of c.10 plastic gears, various diameter sizes (e.g., 15mm to 40mm) Pack of c.10 miniature worm gears. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/416 24 | Electric soldering iron, extra fine tip for electronics, complete with stand and sponge, min. 30W, 220-240V. Two year warranty. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/417 6 | Temperature controlled electric soldering iron/station, complete with stand and cleaning sponge, c.50 W, 220-240V. Two year warranty. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/418 24 | Miniature electronics tool kit, to contain tools such as pliers, snips, wire strippers and screwdrivers, in appropriate case. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/419 4 | Helping-hands for soldering work. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/420 8 | LT variable voltage power supply unit, overload protection. Performance (approx.): DC - 0-25 V (no load) and 24V (8 A load) AC - 0-25 V (no load) and 24V (8 A load) Two year warranty. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/421 2 | De-soldering pump, portable type. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/422 2 of each colour | Single core wire, diameter, c.1.2mm x c.100 m length, to include: Black reels, Red reels, Blue reels. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/423 2 of each colour | Stranded wire, diameter, c.1.4mm x c.100 m length, to include: Black reels, Red reels, Blue reels. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/424 30 | Extra flexible stranded wire, diameter, c.2.8mm x c.100 m length, to include: Red, and Black. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/425 1 | Ribbon cable reel of wire, e.g., 20-way rainbow, c.25 m length. | |
| | Manufacturer: | Catalogue No.: |

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| ENG/A/426 24 | Cable Mounting Sockets 20 way. | |
| Manufacturer: | | Catalogue No.: |
| ENG/A/427 50 50 50 50 | Pack/kit of 4mm plugs and sockets, to include: 4mm Plug Red 4mm Socket Red 4mm Plug Black 4mm Socket Black | |
| Manufacturer: | | Catalogue No.: |
| ENG/A/428 30 30 30 30 30 30 300 | Pack/kit of battery holders and clips, to include: 2XAA 4XAA 2XC 4XC 2XD 4XD PP3 battery snaps | |
| Manufacturer: | | Catalogue No.: |
| ENG/A/429 5 150 150 150 150 150 | Pack/kit of micro-miniature electrolytic capacitors, to include, Variety capacitor kit suitable for simple electronic circuit building. 100uF 16v 220uF 16v 470uF 16v 1000uF 16v 2200uF | |
| Manufacturer: | | Catalogue No.: |
| ENG/A/430 150 of each type | Resistors, to include: 270R 1K 2K2 4K7 10K 22K 33K 100K 150K 1M | |
| Manufacturer: | | Catalogue No.: |
| ENG/A/431 30 of each type | Potentiometers, to include: 1K LIN 220K LIN 10K LIN 47K LIN 100K LIN 1M LIN 100K LIN dual control (stereo) | |
| Manufacturer: | | Catalogue No.: |
| ENG/A/432 1 | Arm robot kit (for micro-computer specified in ENG/A/403). | |
| Manufacturer: | | Catalogue No.: |

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| <p>ENG/A/433 100 of each type</p> | <p>Preset potentiometers (suitable for simple electronic circuit building), to include: 10K 22K 100K</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/434 80 of each type</p> | <p>Miniature motors, to include: High torque miniature motor, 3-6 V High power, 12 V motor Solar motor</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/435 200</p> | <p>Motor mount (e.g., self-adhesive) to suit miniature motors detailed in ENG/A/434.</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/436 10</p> | <p>Miniature multi-ratio gearbox and motor (clearbox motor), assembled OR in kit form, motor to operate on c.1.5-4.5 V power supply.</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/437 10</p> | <p>Miniature worm drive gearbox with motor, assembled or in kit form, motor to operate on c.1.5-4.5 V power supply.</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/438 1000</p> | <p>MES lamp (bulb), 6 V/60 mA, commercial grade.</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/439 1000</p> | <p>MES lamp (bulb) holder, solder tags at base.</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/440 1000</p> | <p>MES lamp (bulb) holder, spring loaded contact, fixing centres: c.23mm.</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/441 100 of each colour</p> | <p>Pack/kit of assorted colours MES lamp holders, to include: Red Green Orange</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/442 200 of each item</p> | <p>5mm LED's and clips, to include: Red Yellow Green Flashing 5mm bezel panel clips (one piece). Silicone rectifier diode IN4001 1A, 50V max. Silicone rectifier diode IN5401 3A, 100V max Seven segment LED display, common cathode, c.13mm</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/443 60</p> | <p>Light dependent resistor (ORP 12 specification)</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/444 100 10</p> | <p>Pack/kit of assorted sizes of strip-board, to include: 25mm x 64mm 119mm x 455mm</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |
| <p>ENG/A/445 50</p> | <p>Pack/kit of breadboard, to include: 400 Tie points.</p> | |
| <p>Manufacturer:</p> | | <p>Catalogue No.:</p> |

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| ENG/A/446 30 of each type | Pack/kit of miniature relays, to include: DPDT 5A SPDT 5A SPDT 10A DPDT 8A Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/447 50 50 | Pack/kit of NTC thermistors, to include: 5 k ohm 2700 ohm Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/448 100 of each type | Pack/kit of general purpose transistors, to include: ZTX321 NPN specification BC108 NPN specification BFY51 NPN specification BC109 NPN specification TIP121 Darlington NPN specification Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/449 50 25 25 15 15 15 | Pack/kit of linear integrated circuits (ICs), to include: 555 Timer 741 Op Amp 3140 Op Amp 556 7400 7490 Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/450 25 25 100 25 | Pack/kit of miniature speakers, for example: 8 ohm 64 ohm Buzzer, 6 V (leads) Miniature piezo buzzer Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/451 75 of each type | Pack/kit of miniature switches, to include: Miniature toggle SPST Miniature toggle SPDT Miniature rocker Standard slide DPDTCO Push to make Push to break Push latching Tilt switch (mercury) Reed switch with magnets Microswitch button Microswitch lever Microminiature microswitch lever Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/452 50 | Pack/kit of miniature thyristors, to include: TIC106D specification Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/453 100 | Control knobs, to fit c.6mm shaft. Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/454 10 | Low-fume / colophony free solder, 500 g / 22 swg (0.71mm). Manufacturer: _____ Catalogue No.: _____ | |

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| ENG/A/455 6 | Multiple drawer storage cabinets, plastic drawer type, wall mountable, c.60 drawer unit size. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/456 24 | Multi-compartment boxes (e.g., plastic type), suitable for storing of electronics circuits / components. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/457 2 | PCB Drill and stand set complete with power supply output of drill 12 V to 18 V. Chuck capacity 0.6mm to 3.2mm. Input of power supply unit 220 V to 240 V. Two year warranty. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/458 1 | Set of Control technology teaching kits. Kits to simulate control of manufacturing processes (e.g. conveyor, sorter, pick and place) and/or examples of control technology used in society (e.g. Car park barrier, lifts, sliding doors). Kit to be accompanied with associated guides/texts, and suitable for use with a class group of students. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/459 1 | Robotic control technology, rover-style robot for demonstration purposes. Capable of object tracing and speech recognition. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/460 1 | Electro-pneumatic teaching kit and suitable air compressor. Capable of allowing for the demonstration of a range of circuits/systems. Kit to be accompanied with associated guides/texts and suitable for use with a class group of students. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/461 1 | Pneumatic system construction and simulation software to include library of standard pneumatic symbols; educational site licence for min. 25 users. | |
| | Manufacturer: Catalogue No.: | |

Section 5: Structure and Mechanisms

| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
|-------------------------------------|--|-----------------------------------|
| ENG/A/501 1 | Low cost construction set/kit, capable of allowing for the construction of models of various structures and mechanisms, e.g., bridges, towers, model automobiles, etc. A number to include appropriate power supply units. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/502 3 of each pack/ set | Pack/set of plastic gear wheels suitable for model building, preferably of the brass hub-type, to include: Pack c.10 12 teeth Pack c.10 18 teeth Pack c.10 30 teeth Pack c.10 58 teeth Pack c.10 bevel gear Pack c.10 worm gear | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/503 3 of each pack/ set | Pack/set of pulley's suitable for model building, preferably of the brass-hub type, to include: Pack of c.10 pulley's c.20mm diameter Pack of c.10 pulley's c.40mm diameter Pack of c.10 pulley's c.60mm diameter | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/504 10 of each pack | Pack of shafting/shaft converters to suit TECH/A/501 and TECH/A/502, to include: Pack of shaft converters (e.g., 6mm to 4mm and/or 4mm to 2mm) Pack of shafts (e.g., 6mm and/or 4mm shafts). | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/505 15 of each pack/set | Pack/set of plastic/wooden wheels suitable for model building/ construction work, to include: Pack plastic c.10 wheels c.60mm diameter Pack plastic c.10 wheels c.50mm diameter Pack wooden c.10 wheels c.25mm diameter Pack wooden c.10 wheels c.50mm diameter | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/506 1 box of each | M3 screws and nuts: Box M3 screws 6mm, pack of 100 Box M3 screws 12mm, pack of 100 Box M3 screws 25mm, pack of 100 Box M3 nuts, pack of 100 Box M3 washers, pack of 500 | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/507 1 box of each | M4 screws and nuts: Box M4 screws 6mm, pack of 100 Box M4 screws 12mm, pack of 100 Box M4 screws 25mm, pack of 100 Box M4 nuts, pack of 100 Box M4 washers, pack of 500 | |
| | Manufacturer: _____ Catalogue No.: _____ | |

Section 6: Safety Equipment

| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
|------------------|---|-----------------------------------|
| ENG/A/601 1 | Wall-Mounted First Aid Cabinet c.370mm X c.24mm with hinged door and equipped with minimum 24 person first aid kit. Product available from PPE and First Aid Framework. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/602 1 | Set of minimum 6 / Laminated wall-mounted assorted Safety Signs. Product available from PPE and First Aid Framework. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/603 30 | Non-mist Safety Goggles, full ventilation, suitable for use over spectacles, kite marked to BS 2092. Product available from PPE and First Aid Framework. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/604 2 | Headband and ear cup type ear defenders. To be supplied with two sets of renewable sealing rings and to conform to EN352/BS5108. Attenuation to 20dB required. Product available from PPE and First Aid Framework. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/605 12 | Clearways face shields with adjustable headbands. Full facial and eye protection while operating machine tools etc. Kite marked to BS2092. Product available from PPE and First Aid Framework. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/606 30 | Student aprons suitable for workshop use. Product available from PPE and First Aid Framework. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/607 1 | Soap/hand cream dispenser. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/608 2 | Roll of Hazzard Warning Floor Tape, 50x3300mm, Yellow-Black. Product available from PPE and First Aid Framework. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/609 12 | Lightweight safety spectacles with fully adjustable side frames and clear side shields, fitted with replaceable lens to BS 2092. Product available from PPE and First Aid Framework. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/610 6 | Pair Gloves for materials handlings, abrasion and cut resistant; oil, grease and dirt repellent. Product available from PPE and First Aid Framework. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/611 6 | Fume displacement unit, replaceable filter type, bench mounted, 230 V, 50 Hz. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/612 6 | Plastic bin, minimum 80 litres. Product available from PPE and First Aid Framework. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/613 1 | Roll of hand paper, 200mm wide, on roller stand. Product available from PPE and First Aid Framework. | |
| | Manufacturer: _____ Catalogue No.: _____ | |

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| ENG/A/614 6 | Gas welding goggles, kite marked to BS 2092 and BS 1542. Product available from PPE and First Aid Framework. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/615 6 | Heavy duty chrome leather apron, complete with apron ties, suitable for hot metal working, e.g., welding, forging, casting, etc. Product available from PPE and First Aid Framework. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/616 6 | Arc-welding auto-darkening helmet. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/617 2 | Pair heating resistant leggings for use during the metal casting process. Product available from PPE and First Aid Framework. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/618 2 | Soft soap/hand barrier cream dispenser, rechargeable type, suitable for wall mounting. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/619 4 | Portable Welding Screens freestanding, self-supporting panels constructed from tubular steel and green flameproof material conforming to BS 3119.20. Dimensions: Frame c.1.8m x c.1.2m; Screen: c.1.5m x c.1.2m. | |
| | Manufacturer: | Catalogue No.: |
| ENG/A/620 | Industrial wet/dry vacuum; Robust electrical vacuum cleaner for wet and dry use for cleaning up dust, debris or water, minimum 1400-watt motor, minimum 20 litre capacity, Dust class category M rated to EN60335-2-69, for dust with workplace limit values > 0.1 mg/m ³ , to include HEPA Cartridge filter, minimum 3 meter hose, air flow sensor to indicate when the air flow is reduced by a clogged filter, full tank, etc., base includes wheels/castors for easy manoeuvring Minimum two year warranty. | |
| | Manufacturer: | Catalogue No.: |

| Section 7: Metal Heating Equipment and Accessories | | |
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| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
| ENG/A/701 1 | Smiths close mouth tongs, flat bit, and lightweight. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/702 1 | Smith bolt type tongs, c.10mm, lightweight. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/703 1 | Smiths square mouth tongs, c.10 m lightweight. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/704 1 | Soldering iron heating stove, chamber type, suitable for two irons. Supplied complete with pizod spark ignitor, burner, burner tray and temperature controller. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/705 2 | Soldering iron, straight with handle, c.220 g. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/706 2 | Soldering iron, straight with handle, c.500 g. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/707 2 | Soldering iron, hatchet with handle, c.500 g. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/708 1 | Electric fired kiln, max. temperature c.1000 °C. Overall dimensions c.420mm x c.300mm x c.245mm. Temperature indicator, removable burner tray and refractory tile. Five year on-site warranty to include parts and labour. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/709 1 | Tongs, scissor action, brass type, size: c.200mm. | |
| | Manufacturer: Catalogue No.: | |
| ENG/A/710 1 | Multi-use portable gas torch with gas container, fine flame adjustment, screw-on burner, safety checked and test burned. Three year on-site warranty to include parts and labour. | |
| | Manufacturer: Catalogue No.: | |

Section 8: Sheet Metal and Polymer Equipment

| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
|------------------|--|-----------------------------------|
| ENG/A/801 2 | Tinmans folding bars, c.250mm | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/802 2 | Tinmans snips: straight, c.200mm. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/803 2 | Tinmans snips, straight, c.150mm. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/804 2 | Tinmans snips, curved, c.200mm. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/805 1 | Vacuum forming machine, bench top model, cut sheet size min. 250mm x min. 450mm. Electrics – 230 V, 50 Hz. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/806 2 | Plastic faced hammer, c.25mm diameter head. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/807 2 | Copper and hide-faced hammer, c.40mm head. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/808 2 | Rawhide mallet, c.40mm diameter head. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/809 2 | Boxwood mallet, c.40mm diameter head. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/810 2 | Boxwood mallet, c.50mm diameter head. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/811 2 | Boxwood bossing mallet, c.50mm diameter head. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/812 2 | Boxwood bossing mallet, c.60mm diameter head. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/813 1 | Set of tinmans groovers, e.g., 5mm, 6mm, 7mm. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/814 6 | Steel wire brush, e.g., 4-row type, fitted with plain back. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/815 2 | Plannishing hammer, c.125 g. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/816 2 | Raising hammer, c.200 g. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/817 2 | Collet hammer, c.200 g. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/818 2 | Blocking hammer, c.200 g. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/819 2 | Doming hammer, c.150 g. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/820 2 | Repousse hammer, c.150 g. | |
| | Manufacturer: _____ Catalogue No.: _____ | |

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| ENG/A/821 1 | Set of repousse punches. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/822 1 | Set of dotting punches. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/823 1 | Set of engravers, different shapes in set. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/824 1 | Doming block, c.75mm cube. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/825 2 | Leather sandbag, c.200mm dia. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/826 1 | Leather sandbag, c.250mm dia. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/827 1 | Magnetic folding machine, Capacity: 1250 x 1,6mm at 400 N/mm ² , 230 volt. To be supplied with: Wide clamping bar, narrow clamping bar, slotted clamping bar for shallow boxes, segmented clamping bar (finders), sheet support. Five year on-site warranty to include parts and labour. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/828 1 | Guillotine – treadle type. Capacity in steel up to c.1.2mm, c.1000mm blade length, 600mm back stop, 200mm side stop, minimum weight 140kg. Five year on-site warranty to include parts and labour. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/829 1 | Plastic dip coating unit. Minimum capacity 50 litres. Supplied complete with air blower and air pressure regulator together with 20 kg packs of two different colours of Polyethylene powder. Electrics: 1 pH, 230 V, 50 Hz. Three year on-site warranty to include parts and labour. | | |
| | Manufacturer: | Catalogue No.: | |
| ENG/A/830 4 | Thermoplastic sheet strip heater, suitable for bending of thermo-plastic sheets up to c.6mm thick and up to c.500mm wide. 110 V, 50 Hz. Three year on-site warranty to include parts and labour. | | |
| | Manufacturer: | Catalogue No.: | |

Section 9: Welding Equipment and Accessories

| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
|------------------|--|--------------------------------|
| ENG/A/901 1 | Welding set with six nozzles, c.1 to 7. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/902 1 | Length of oxygen and acetylene hose, c.5 metres long x 8mm (or std) bore complete with standard fittings. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/903 1 | Set of flashback arrestors (one for acetylene, one for oxygen). Three year on-site warranty to include parts and labour. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/904 1 | Acetylene two stage regulator. Three year on-site warranty to include parts and labour. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/905 1 | Oxygen two stage regulator. Three year on-site warranty to include parts and labour. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/906 1 | Spindle key. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/907 1 | Rubber wheeled welding trolley suitable for two cylinders. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/908 1 | Set of tip cleaners. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/909 1 | MIG welding set, wire size c.0.6-1.2mm, OCV, c.46V, current range c.30-250A. Three year on-site warranty to include parts and labour. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/910 1 | Electric arc welding set, fan cooled transformer output, c.220 A, 3 pH/1 pH, 5 kVA. Three year on-site warranty to include parts and labour. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/911 1 | Welding kit to suit ENG/A/410 to include, electrode holder, earth clamp, chipping hammer, primary and earth cables and hand shield. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/912 1 | Spark Lighter. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/913 4 | G cramp, c.100mm. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/914 2 | G cramp, c.200mm. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/915 1 | Spot welding gun, portable and suitable for bench mounting. Capacity on mild sheet 0.5 +0.5mm min., 2 + 2mm max. thickness, max. length of arms c.500mm. Built in timer, 230V, 1 pH, 50 Hz, approx. weight 10 kg. Two year warranty. | |
| | Manufacturer: _____ Catalogue No.: _____ | |

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| ENG/A/916 | 150mm magnetic welding holder. | | |
| 6 | Manufacturer: | Catalogue No.: | |

| Section 10: Pneumatics Equipment Control | | |
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| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
| ENG/A/1001 1 | Pneumatic modular board to allow for mounting of the following components ENG/A/1002-1010 below. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1002 12 | Single-acting cylinder, c.20mm bore, c.50mm stroke. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1003 2 | Double-acting cylinder, c.20mm bore, c.50mm stroke. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1004 12 | Five port valve. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1005 12 | Flow control valves (restrictors). | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1006 12 | 3/2 pushbutton valves. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1007 6 | Visual indicators. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1008 6 | Limit switch (roller lever activated). | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1009 2 | Reservoir (45 cm ³ capacity). | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1010 2 | Manifold, c.8mm x c.4mm outlet. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1011 1 | Air compressor, c.8 bar, c.5 litres/m, c.24 litre receiver. Two year warranty. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1012 1 | Nylon tube, c.4mm diameter, red, 10 metres. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1013 1 | Nylon tube, c.4mm diameter, blue, 10 metres. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1014 1 | Nylon tube, c.4mm diameter, clear, 10 metres. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1015 2 | Safety cutter, to suit cutting of nylon tube at ENG/A/1012-1014 above. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1016 12 | Equal T-connectors. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1017 12 | Equal elbow connectors. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1018 24 | Blanking plugs to suit ENG/A/1016-1017 above. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1019 1 | Basic pneumatics system construction & simulation software; license for seven users. | |
| | Manufacturer: _____ Catalogue No.: _____ | |

Section 11: Paint Brushes, Sweeping Brushes and Dispensers

| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
|-------------------------------|---|-----------------------------------|
| ENG/A/1101 12 of each size | Paint Brushes: 12mm, 25mm, 38mm, 50mm | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1102 1 | Paint Brush Pencil Lark/Crow. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1103 1 | 25mm Paint Brush Fitches consisting 1/round, 1/lining, 1/flat and 1/bent. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1104 24 | Banister type c.300mm X 50mm flat-backed Bench Brush. Resin set pure bristle. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1105 4 | 600mm Sweeping Brush with Handle. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1106 1 | Galvanised bucket, c.10 litre capacity. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1107 1 | Plastic funnel, c.100mm diameter. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1108 1 | 300mm X 200mm Square Mouth 700mm Handled Shovel. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1109 2 | Heavy-duty Plastic Bucket c.10 litre capacity. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/A/1110 6 | Large Plastic Dust/Litter Bin with Lid capacity c.80 litres. | |
| | Manufacturer: _____ Catalogue No.: _____ | |

Note: Equipment to be commissioned and training provided where appropriate. Where servicing is required during the warranty period then the cost should be included in the tender price.

Equipment for Engineering ENG/A

| Section | Code | Description and Specifications: | Total Cost €: |
|------------|------------------|--|---------------|
| Section 1 | ENG/A/101-123 | Drawing and Design | |
| Section 2 | ENG/A/2001-2113 | General Workshop Equipment and Tools | |
| Section 3 | ENG/A/301- 302 | Power Tools | |
| Section 4 | ENG/A/401- 461 | Electronics and Control Technology | |
| Section 5 | ENG/A/501- 507 | Structures and Mechanisms | |
| Section 6 | ENG/A/601- 620 | Safety Equipment | |
| Section 7 | ENG/A/701-710 | Metal Heating Equipment and Accessories | |
| Section 8 | ENG/A/801-830 | Sheet Metal and Polymer Equipment | |
| Section 9 | ENG/A/901- 916 | Welding Equipment and Accessories | |
| Section 10 | ENG/A/1001- 1019 | Pneumatics Equipment | |
| Section 11 | ENG/A/1101- 1110 | Paint brushes, Sweeping brushes and Dispensers | |

| | |
|-----------------------------|--|
| Total (€) | |
| Add for VAT (€) | |
| Total amount for List A (€) | |

Standards, Specifications and Conditions

**All Equipment shall be Durable and Safe for School Use.
Equipment wholly or partly funded from public funds is subject to Inspection by
Officers from the Department of Education.**

It is essential that tenders for equipment for School Use shall:

- i) Comply fully with the specifications and be durable and safe for School Use.
- ii) Comply fully with the standards as detailed and shall comply fully with European (EN) standards, both established and developing.
- iii) Comply with European electrical standards and CE marking as appropriate.
- iv) Be accompanied by documentation of sufficient detail for full evaluation.
- v) Include the completed and signed certificate of compliance.

Award of a contract is conditional on the production of a current tax clearance certificate.

Failure to comply with the above may result in the tender being deemed null and void.

Certificate of Compliance with Standards, Specifications & Conditions:

I/We certify that the equipment tendered complies in all respects with the Standards, Specifications and other requirements/conditions specified in this tender document.

I/We hold a current tax clearance certificate.

Company: _____

Signed: _____ Date: _____

Position: _____

Engineering Equipment List B

Section 1: Machine Tools and Storage

| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
|------------------|---|-----------------------------------|
| ENG/B/101 1 | <p>Bandsaw</p> <p>Floor-standing, Min. Cutting Height 310mm, Min. Cutting Width 420mm, Tilting Table to 45 degrees, Rip Fence Aluminium on Cast Iron Mounting with Steel rail, slot in work table to accept mitre guide, mitre guide to be supplied, Upper and Lower Precision Guides in steel, DC Electronic Brake Unit and over load protection, Non- latching emergency stop on bottom of frame, Locks on Door, minimum 3HP, 3 phase Bi-metal (M42) blade to be supplied for metal cutting, GP 3/8" (10mm) x 8 TPI Carbon steel Blade for cutting plastics</p> <p>Follow Health & Safety advice regarding use of this machine and age restrictions on its use; Statutory Instruments (SI) No. 36 of 2016 Safety, Health and Welfare at Work (General Application) (Amendment) Regulations 2016</p> <p style="color: red;">Five year on-site warranty to include parts and labour.</p> | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Manufacturer:</td> <td style="width: 50%;">Catalogue No.:</td> </tr> </table> | |
| Manufacturer: | Catalogue No.: | |
| ENG/B/102 2 | <p>Scroll Saw, 450mm, with tilt table, variable speed motor, sawdust blower, workpiece hold-down and blade guard attachment. Motor c.120-200 W, 230 V.</p> <p style="color: red;">Three year on-site warranty to include parts and labour.</p> | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Manufacturer:</td> <td style="width: 50%;">Catalogue No.:</td> </tr> </table> | |
| Manufacturer: | Catalogue No.: | |
| ENG/B/103 2 | <p>Drill-press vice (approx. 100mm and 150mm jaws, prismatic type) complete with appropriate hold down clamps. (if not supplied with pillar drill ENG/B/106)</p> | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Manufacturer:</td> <td style="width: 50%;">Catalogue No.:</td> </tr> </table> | |
| Manufacturer: | Catalogue No.: | |
| ENG/B/104 1 | <p>Lever shearing machine, capacity 6mm strip, c.12mm round.</p> <p style="color: red;">Five year on-site warranty to include parts and labour.</p> | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Manufacturer:</td> <td style="width: 50%;">Catalogue No.:</td> </tr> </table> | |
| Manufacturer: | Catalogue No.: | |
| ENG/B/105 1 | <p>Horizontal band saw (mobile), c.200mm cutting capacity, cast iron arm, precision saw blade guide, hinged joint in pre-taper roller bearings, capable of variable speed 380 V 3 pH / 230 V 1 pH.</p> <p style="color: red;">Five year on-site warranty to include parts and labour.</p> | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Manufacturer:</td> <td style="width: 50%;">Catalogue No.:</td> </tr> </table> | |
| Manufacturer: | Catalogue No.: | |
| ENG/B/106 2 | <p>Drilling machine, pedestal model, capacity in steel c.20mm. All geared variable spindle speeds. Complete with fitted keyless drill chuck, key and chuck guard. Electrics 3 pH, 380V, 50Hz. Supplied complete with starter/ isolator. Minimum weight 120kg.</p> <p style="color: red;">Five year on-site warranty to include parts and labour.</p> | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Manufacturer:</td> <td style="width: 50%;">Catalogue No.:</td> </tr> </table> | |
| Manufacturer: | Catalogue No.: | |

| | | |
|-------------------|---|----------------|
| ENG/B/107 1 | Drill grinding attachment, c.6 to 25mm. | |
| | Manufacturer: | Catalogue No.: |
| ENG/B/108 1 | Injection Moulding Machine: for demonstration of injection moulding principles; bench top/portable model suitable for school use; set of 4 moulds for production of objects up to c.20 g; 2 kg of suitable polymer granules. 230 V, 50 Hz. Three year on-site warranty to include parts and labour. | |
| | Manufacturer: | Catalogue No.: |
| ENG/B/109 1 | Low cost tensile testing/extensometer machine, portable/bench mounted type. Three year on-site warranty to include parts and labour. | |
| | Manufacturer: | Catalogue No.: |
| ENG/B/110 1 | Impact testing Simulation software (education version) capable of carrying out Izod/Charpy/tensile impact testing on various materials. Three year on-site warranty to include parts and labour. | |
| | Manufacturer: | Catalogue No.: |
| ENG/B/111 1 | Low cost non-destructive magnetic particle testing kit. Two year warranty. | |
| | Manufacturer: | Catalogue No.: |
| ENG/B/112(A) 3 | Centre Lathe. All metric indexing. Centre height: c.140mm to 180mm to admit c.500mm to 1000mm between centres. Fully enclosed oil bath gearbox with provision for cutting screw thread pitches in millimetres. Range of spindle speeds (typical speeds; 36-1600/40-2500 rpm). Spindle bore, c.38mm min. Foot-operated brake/switch, no more than 24V to control buttons, c.1-2.2 kW electric motor. Electric supply 380 V, 3 pH, 50 Hz. Machine to be mounted on steel cabinet base and supplied complete with starter/isolator. The following total number of accessories should be supplied with the lathe and, where possible, fitted. <ul style="list-style-type: none"> a) Pump, tank and fittings. b) Quick change tool-post. c) Carbide tooling package to suit lathe, to include: right hand tool holder, boring bar (c.12mm), parting-off block, combination knurling tool and blade. All tooling should have independent tool holders d) Appropriate carbide inserts for tooling package at c. e) Multi-head knurling tool with fine, medium and coarse knurls. f) Three jaw self-centering chuck, c.110mm. Chuck complete with key and set of reversible jaws. g) Four jaw independent chuck, c.150-200mm, complete with key. h) Drill chuck, c.13mm capacity complete with key and arbor. Keyless Chuck to suit tailstock of lathe. i) Morse taper centres – one live centre and one dead centre. j) Face plate, c.150-300mm. k) Travelling steady, and fixed steady – 3 point. l) Angle poise low voltage lamp. m) Set of spanners. n) Operator handbook. o) Set of anti-vibration pads - fitted to lathe. p) Digital read outs fitted also Five year on-site warranty to include parts and labour. | |
| | Manufacturer: | Catalogue No.: |

| | | |
|---------------------------|---|--|
| <p>ENG/B/112(B) 1</p> | <p>Schools can have the option of reducing the quantity of Centre Lathes (ENG/B/112(A)) to two and getting a Mill Drill instead, spec detail below: The schools choice should be clear on the tendering documents.</p> <p>Pedestal Drill / Milling Machine with gearbox</p> <ul style="list-style-type: none"> • Heavy, solid cast design • Quality industrial electric motor • Drilling depth stop • Thread cutting function • User-friendly control panel with emergency stop button • Shaft milling cutter approx. 28mm • Milling table size approx. 750mm x 250mm • X-axis travel 400mm, Y-axis 200mm • Spindle reach min. 250mm • Spindle type: MT4 • Spindle speed range: Approx. 100-1500 min-1 • Spindle quill diameter: Approx. 70mm • To be supplied with 3 suitable mill cutting drill bits <p style="color: red;">Five year on-site warranty to include parts and labour.</p> | |
| <p>ENG/B/113(A) 2</p> | <p>Tool storage presses for hand tools, lockable, approximate size 1900mm x 1000mm x 500mm. These to be supplied with cut-out slots.</p> | |
| | <p>Manufacturer: _____ Catalogue No.: _____</p> | |
| | <p>OR</p> | |
| <p>ENG/B/113(B) 2</p> | <p>Tool storage presses for hand tools, lockable, approximate size 1900mm x 1000mm x 500mm. These to be supplied with storage trays</p> | |
| <p>ENG/B/114 1</p> | <p>Mobile tool cabinet, c.1000 x c.500 x c.350mm, all metal construction complete with fitted drawer and lock.</p> | |
| | <p>Manufacturer: _____ Catalogue No.: _____</p> | |

| Section 2: Digital Technologies and Computer Aided Manufacturing (CAM) | | |
|--|---|-----------------------------|
| Code Quantity | Description and Specification | Cost (€) & Warranty Offered |
| ENG/B/201 1 | Laptop suitable to run CNC, laser cutter and 3D printer, to be supplied with a case and wireless optical mouse. T4/ DCG laptop specification. Purchasing details; https://www.pdsttechnologyineducation.ie/en/Technology/Purchasing-Frameworks/ Three year warranty. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/B/202 1 | Visualiser: Min. 13 MP Lens, Up to 4K at 30 fps Video, Built-In Mic, coverage A3 + (533x330mm), USB Interface & Power Connection to a PC. Five year warranty. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/B/203 1 | 3D Printer: Min area 200mm x 200mm x 200mm, Suitable for education purposes (not DIY/home spec.) and capable of high quality printing, user-friendly software based on open-source platform (Compatible with Parametric Modelling software used in Design and Communication Graphics (DCG)), Support materials such as PLA, Fully enclosed print chamber, and Technical support must be available. Roll of PLA to be provided with machine. Three year on-site warranty to include parts and labour. | |
| | Manufacturer: _____ Catalogue No.: _____ | |
| ENG/B/204 1 | Bench mounted computer numerically controlled (CNC) slant bed educational training lathe: max. machining diameter c.55mm, travel in x-axis: c.50mm, travel in z-axis: c.250mm, typical spindle speed range: c.100-4000 rpm. Electric supply: 110/230 V, 1 pH, 50/60 Hz. Machine to be compatible with standard computer hardware, operating system/CADCAM software, educational (NOT industry standard), must provide simulation and be multi user platform, fully enclosed working area, operator's handbook. Appropriate tooling package to cater for standard lathe operations to be included. <u>Note: Details of specification of computer required to operate to be furnished to school.</u> Five year on-site warranty to include parts and labour. ONE ONLY TO BE SUPPLIED PER SCHOOL | |
| | Manufacturer: _____ Catalogue No.: _____ | |

| | | |
|------------------------|---|-----------------------|
| <p>ENG/B/205 1</p> | <p>Laser cutter/engraver: CO2, workable on a variety of materials, minimum engraving area 300mm x 300mm, accommodate minimum 100mm thickness, minimum 30 Watt laser tube, open source software and driver, Raster & Vector operating modes, single phase, must come with a Vector grid, Air compressor and Fume extraction system, and Technical support must be available.</p> <p>Three Year on-site warranty on machine and CO2 tube.</p> <p>NOTE:</p> <p>Only 1 laser cutter to share between Engineering, Technology and Construction Studies room.</p> <p>If school offers any of these three subjects (or are getting an upgrade to <u>any</u> of these rooms) they are entitled to get a laser cutter.</p> <p>Location of laser cutter is identified on each of the room layouts.</p> | |
| | | <p>Catalogue No.:</p> |

Note: Equipment to be commissioned and training provided where appropriate. Where servicing is required during the warranty period then the cost should be included in the tender price.

| Equipment for Engineering ENG/B | | | |
|---------------------------------|---------------|---|---------------|
| Section | Code | Description and Specifications: | Total Cost €: |
| Section 1 | ENG/B/101-114 | Machine Tools and Storage | |
| Section 2 | ENG/B/201-205 | Digital Technologies and Computer Aided Manufacturing | |

| | |
|-----------------------------|--|
| Total (€) | |
| Add for VAT (€) | |
| Total amount for List B (€) | |

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Company: _____

Signed: _____ Date: _____

Position: _____

Statutory Instruments (SI) No. 36 of 2016 Safety, Health and Welfare at Work (General Application) (Amendment) Regulations 2016

Notes regarding Training, instruction and information are detailed in Statutory Instruments (SI) No. 36 of 2016 Safety, Health and Welfare at Work (General Application) (Amendment) Regulations 2016. This full document should be considered if a school is using the machines outlined in the document.

A few key notes include:

An employer shall ensure that an employee who operates a woodworking machine—

- o (a) has been trained in operating the machine,
- o (b) has received instruction in accordance with paragraph (2)(a), and
- o (c) has been provided with the information specified in paragraph (2)(b).

- An employer shall ensure that in advance of operating a wood-working machine an employee shall—
 - (a) receive instruction on—
 - (i) the dangers arising in connection with the machine, the precautions to be observed and the requirements of the Regulations in this Part which apply to the machine,
 - (ii) how to use the guards and any other protection measures required to be provided by Regulation 199 and Regulations 201 to 207 which relate to the machine, and
 - (iii) procedures for setting up, adjusting, using and cleaning the machine, and
 - (b) be provided with information on the use of the machine, including where relevant—
 - (i) the speed, range, type and dimensions of tools suitable for the machine, (ii) any limitation on the cutting speeds of the machine, particular operations or size and material of any workpiece,
 - (iv) procedures relating to the repair or replacement of any guard or protection device,
 - (v) the availability, suitability and use of any additional protection device, (v) safe methods of handling tools, 8 [36]
 - (vi) correct procedures for start-up, shutdown and isolation of the machine, taking into account the time required for all parts of the machine to come to a halt, (vii) procedures for cleaning the machine,
 - (vii) procedures for setting or adjusting any guard, tool, clamp or other part of a machine, and
 - (viii) in the case of CNC machines, programming.