

Section 6- Schedule of supply

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1. List of Goods and Related Services

Package Name: Supply of Mechanical and related items for Industrial Training Institutes to enhance technical and vocational skills among the youth of Himachal Pradesh (HPSDP-DOTE/11)

Lot No: Not-applicable							
Lot Name: Not-applicable							
Item No	Name of Goods or Related Services	Description	Unit of Measure -ment	Quantity	Specification by the supplier (To be filled by the supplier)	Detailed information brochure attached at Page No.	Pass/Fail (By Purchaser)
1.	Pillar Type Electric Motorized Drilling machine of 20 mm Capacity	Pillar Type Drilling machine: <ul style="list-style-type: none"> - Drilling Capacity : 20mm Max - Chuck Capacity : 0-20 mm - Spindle Taper : Minimum MT-3 - Spindle Traverse : Minimum 100mm - Distance between Spindle and Table: Minimum 300mm - Distance between Spindle and Base : Minimum 500 mm - Table Working Surface Area : Minimum 200 x 200 mm - Swivel Table - Number of Spindle Speeds: at least 8, - Pillar Diameter: Minimum 57mm - Spindle Speed - between 115 rpm – 2060 rpm or Higher - Coolant System with Coolant 	No.	5			

		Pump with tank. - Main Motor not less than 1HP - Operating Voltage: 440V, 3 Phase. - Suitable Starter with all safety gadgets. - Suitable capacity electric cable of minimum 5 meter length for connecting with 440V, 3 phase supply					
2.	Motorised Bench Grinder	Motorised Bench Grinder : - Grinding Wheel Diameter : Minimum 150mm - Double sided - Two wheels rough and smooth with Tool Base - No Load Speed : 1500-3600 rpm - Operating Voltage: 440 V , 3 phase - Motor Power : Minimum 1 HP - Suitable DOL Starter with all safety gadgets. - Suitable capacity electric cable of minimum 5 meter length for connecting with 440V, 3 phase supply	No.	4			
3.	Bench type Electric Motorized Drilling Machine of 12 mm capacity	Bench Drilling Machine : - Drilling Capacity: 12 mm - Chuck Capacity 1.5-12 mm - Minimum spindle travel :80 mm - Spindle taper: Solid - Minimum No. of spindle speed : 2 - Range of spindle speed:500-3000 rpm	No.	4			

		<ul style="list-style-type: none"> - Electric Motor: Minimum 0.5 H.P, 3 Phase - Suitable capacity electric cable of minimum 5 meter length for connecting with 440V, 3 phase supply 					
4.	Double Ended pedestal Grinding machine with 250mm wheels.	Pedestal Grinder, Double Ended : <ul style="list-style-type: none"> -Two wheels one rough and one smooth - Grinding Wheel Diameter : 250 mm each - Thick wheel guards with built in dust chutes - No load Speed : Minimum 1500 RPM - Operating Voltage :440 V , 3Phase - Motor Capacity: Minimum 2 HP - Adjustable spark detectors for safety - Adjustable shatter-proof eye shields - Thick wheel guards with built in dust chutes - Suitable capacity electric cable of minimum 5 meter length for connecting with 440V, 3 phase supply 	No.	2			
5.	Transformer welding set - continuous welding current, with all accessories and electrode holder 60%	Transformer welding set: <ul style="list-style-type: none"> - Operating Voltage: 415-440V, 3 Phase - Open circuit voltage range: 60-100 V 	No.	2			

	Duty Cycle with Standard Accessories	<ul style="list-style-type: none"> - Welding Current Range : 60 – 400A - Current @ 60% duty cycle 300A - Display of Current & Voltage Digital - Stepless and smooth variable current regulation. - Swivel front wheel and rear wheel arrangement. - Forced Air Cooling. - Suitable and safe On/Off switch control and Current control with indicators 					
6.	Welder cable	Welder cable: <ul style="list-style-type: none"> - Size: 50 sq. mm - Material: copper with Tough Rubber - Length: 50 meters - Max Current carrying capacity: Not less than 400 Amps 	No.	1			
7.	Earth clamps	Heavy duty earth clamp for welding: <ul style="list-style-type: none"> - Jaw opening up to 60 mm. - Zinc coated steel with copper plated jaws and copper mesh. 	No.	4			
8.	Oxy - acetylene gas welding set equipment with hoses, Oxygen & Acetylene cylinders, regulator and other accessories.	Oxy - acetylene gas welding set equipment consisting of : <ul style="list-style-type: none"> - Oxygen cylinder of standard industrial Capacity - Acetylene cylinder of standard Industrial Capacity - Double stage oxygen regulator 	No.	3			

		<ul style="list-style-type: none"> - Double stage acetylene regulator - Oxygen & Acetylene Flashback arrestor for Cylinder and Torch - Twin hoses(Acetylene & Oxygen)10m Each - Welding torch with Nozzles - Twin Cylinders Trolley <p>Complete oxy-acetylene welding kit to handle a broad range of cutting, welding, and heating applications. With hoses, welding and cutting torches, goggles, tip cleaners and striker packed in a heavy-duty moulded storage case. Professional-quality Victor-style torch All-brass torch handle and check valves Brass and steel cutting torch attachment Brass and copper welding/heating tip CGA 540 oxygen regulator CGA510 acetylene regulator 12 ft. x 1/4 in. ID R-grade oxygen and Acetylene hoses for oxygen acetylene cylinder.</p>					
9.	Gas welding table with positioner with Fire Bricks 900 X 600 X 750 mm	Gas welding table with positioner with Fire Bricks - Size: 900 X 600 X 750 mm made with 40 x 40 x 4 mm angle iron and top tray covered with 5mm MS sheet, with positioner suitable for all weld positions. - Top tray covered with refractory bricks- Refer Specification as per Drawing No DWG-MM-01 Attached- Gas Welding Table Spray Painted	No.	2			

10.	Gas Welding Table with fire bricks top and stand	Gas welding table with positioner : - With Fire Bricks - Size : 1220 X760 mm made with 40 x 40 x 4 mm angle iron and top tray covered with 5mm MS sheet with positioner suitable for all weld positions. - Top tray covered with refractory bricks - Refer Specification as per Drawing No DWG-MM-03 Attached. - Gas Welding Table Spray Painted	No.	1			
11.	Welding torch tips of different sizes for Oxy- acetylene gas welding	Welding torch tips: - Welding torch tips of different sizes for Oxy- acetylene gas welding to fit nozzle no. 1, 2, & 3	No.	2			
12.	Spark lighter for Gas Welding	Spark Lighter for Gas Welding - Spark Lighter used for Gas Welding & Cutting - Made of Stainless steel	No.	4			
13.	Trolley for Twin gas cylinders.	-Trolley for Twin gas cylinders - To carry Two Cylinders of standard Industrial Capacity. - Movable trolley with solid tyre wheels. - refer Specification as per Drawing No DWG-MM-02 Attached	No.	2			
14.	Welding torches.	Welding Torch for Oxy-Acetylene with Nozzles no. 1, 2, & 3 - Material of Torch: Brass	No.	2			
15.	Anvil 50 Kgs with Stand	Anvil with Stand: - Made up of Solid cast steel	No.	2			

		<p>hardened and tempered.</p> <ul style="list-style-type: none"> - Single Horn Anvil With Curved Base Size/Working Area at least 12 Sq. Inches - Weight: 50 KGs - 45-60 Rockwell Hardness is required - Fine finish and corrosion free - Suitable and sturdy Anvil Stand 					
16.	Arbor press hand operated 2-ton capacity	<p>Arbor Press:</p> <ul style="list-style-type: none"> - Mechanical Type hand operated with attachments. - Precision cut steel rams and pinions for accurate operation - Tables and slotted table-plates should be flat and parallel to provide accurate support - Pressure Capacity: 2 tons - Rust Proof 	No.	1			
17.	Pipe bender (Hydraulic type)	<p>Dies: 1/2,3/4,1,1.1/4,1.1/2,2,2.1/2,3,4 Inch, Size (inch): ½ to 4, Thickness : 2.5mm – 6mm,</p>	No.	1			
18.	Chain Pulley Block of 3-ton capacity with tripod stand	<p>Chain Pulley Block with compatible tripod stand:</p> <ul style="list-style-type: none"> - Capacity :3 Ton <p>Tripod Stand Specifications :</p> <ul style="list-style-type: none"> - Capacity to lift minimum 3 Ton of load - Minimum Height to Eye : 3000 mm - Minimum Leg Length : 3400 mm - Legs should be Adjustable for 	No.	1			

		uneven level ground, shallow slopes and slight inclines. - Feet Should be suitable for hard and soft ground.					
19.	Wash Basin (16"X14"X10") Equivalent metric	Wall Hung Wash Basin with full pedestal - Material: Ceramic - Size: (16"x14"x10") Equivalent metric - Suitable CP Waste pipe - Suitable angles & bolts for fixing	No.	2			
20.	Water closet (European, type p) complete with overhead cistern	Water closet (European, type p) complete with overhead cistern - Closet Material : Ceramic - Minimum Size : 480x350x380 mm Cistern : - Capacity : Minimum 10 Litres - Cistern Material : PVC - Complete fittings of Cistern(Float Valve and Connection Hoses) - Suitable angles & bolts for fixing	No.	1			
21.	S.S. & S.C. Centre Lathe (All Geared)	S.S. & S.C. Centre Lathe(All Geared): - Bed Type: Flat Bed - Height of Centre: 150 mm and above - Distance between centres: 1000 mm and above - Swing Over bed: 450 mm and above - Swing over cross slide: 225 mm and above - Movement of cross slide: 225	No.	4			

		mm and above - Movement of compound slide: 100 mm and above - Bed Width: 275 mm and above Main & Spindle: - Spindle nose: Threaded type, Dia 70 mm and above - Spindle Bore: Dia 50 mm and above Tail Stock: - Tail Stock Spindle/Quill Dia: 50 mm and above - Spindle Travel/Quill Traver: 140 mm and above Speed: - No. os spindle speeds: 8 Minimum - RPM/ Range: 80 - 1000 Minimum Feed: - Longitudinal Feeds & Range: 24/0.045 -0.63 mm/rev - Transverse feeds and Range: 24/0.015 -0.21mm/rev Threads: - Metric : Minimum 20, 0.5 - 7 mm - Inch: Minimum 24, 56-4 TPI Electrical : - Motor capacity: Minimum 5.5 KW - Power Supply: Three Phase, 415 - 440 V, 50 Hz					
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22.	Arc welding table with all metal top and with positioner.	Arc welding table with positioner <ul style="list-style-type: none"> - Size: 1200X1200 X 750 mm - Made with 40 x 40 x 4 mm angle iron with positioner suitable for all weld positions. - All Metal Top - Refer Specification as per Drawing No DWG-MM-07 Attached - The Arc welding table should be suitably painted 	No.	2			
23.	Compressor Unit of 8 Bar capacity	Compressor Unit (Horizontal): <ul style="list-style-type: none"> - Type : Reciprocating - Suitable for Pressure: Min 8 bar, - Delivery: 50 lpm (or more), - Reservoir capacity: 24 Litres (or more), - With Pressure regulator and water separator - protective enclosed belt guard - Overload motor protection - Accessible drain valve and - Automatic start/stop pressure switch control - Cast Iron Cylinder and frame - Operating Voltage: 230V, 50 Hz, 	No.	2			
24.	Cut section model for pneumatic components	Cut section model for pneumatic components: <ul style="list-style-type: none"> - Compressor - Filter - Oil/Water Separator - Ball Valve - Unloader Valve, - Solenoid Valve, - Relay Valve, 	No.	2			

		<ul style="list-style-type: none"> - Air Drier - Filter/Regular/Lubricator(FRL) - Other essential components of pneumatic - The sectioned parts to be complete in itself to demonstrate the internal construction details. - The Cut section model components should be mounted on a suitable frame. - The model shall have a detachable transparent fabric sheet all around for protection against dust and moisture. 					
25.	Cut-section models for hydraulic components	Cut section model for Hydraulic components: <ul style="list-style-type: none"> - Hydraulic pump - Accumulator - Solenoid Valve - Filter - Pressure Relief Valve - Directional Valve - Flow Control Valve - Check Valve - Hydraulic Cylinder - Other essential components of Hydraulic. - The sectioned parts to be complete in itself to demonstrate the internal construction details. - The Cut section model components should be mounted on a suitable frame. - The model shall have a detachable transparent fabric 	No.	2			

		sheet all around for protection against dust and moisture.					
26.	Trolley type portable air compressor single cylinder with 45 litres capacity Air tank, along with accessories with working pressure 6.5 kg/sq cm	Trolley type portable air compressor : <ul style="list-style-type: none"> - Cylinder : Single - Working Pressure: Min 6.5 Kg/sq cm - Reservoir capacity: Min. 45 Litres - Operating Voltage: 230V, 50 Hz, - With pressure regulator and water separator - Protective enclosed belt guard - Overload motor protection - Accessible drain valve - Automatic start/stop pressure switch control 	No.	1			
27.	Solar water heater system	Solar water heater system : <ul style="list-style-type: none"> - Type of Collector : Evacuated Tube Collectors (ETC) - Tube Dimensions : 47 – 1800 mm or 58 – 1800 mm or suitable - Inner Tank Materials : High-grade Stainless Steel - Outer Tank Materials : Stainless Steel / Powder Coated - Working Temperature : 65 degree C to 85 degree C - Tank Insulation : High-quality PUF - Tank Volume : Min. 200 Ltr - Stand Frame : Galvanized Powder Coated - Type of Circulation : Thermo Siphon - Type of Grommets : Silicon 	No.	1			

		Rubbers					
28.	Workstation with 40 square mm aluminium profile legs, wooden work surface, and one pedestal drawer unit having 5 drawers, each with handles and individual locks, on metallic full panel drawer slide	Hydraulic / Pneumatic Workstation - Workstation with 40 square mm aluminium profile legs, wooden work surface, and one pedestal drawer unit having 5 drawers, each with handles and individual locks, on metallic full panel drawer slide: - Work Table : Size(Approx.) L1200mmXW900mmXH900mm, with four castor wheels including two lockable wheels at the front side, (2) - Drawer : Size (Approx.) – L460mmxW495mm xH158mm each, and - Overall size of Drawer unit (Approx.) - L470mmxW495mmxH825mm - Drawer slide height (Approx.) :85mm.	No.	2			
29.	Hydraulic Trainer Kit with components and Accessories	Hydraulic Trainer Kit, each consisting of the following matching components and accessories: - One No. Hydraulic Power pack : with (1) external gear pump having a delivery rate of 2.5 lpm, (approx.) @ 1400 rpm operating pressure 60 bar, coupled to a single-phase AC motor (230 V AC) having start capacitor and ON/OFF switch and overload protection, (2) pressure relief valve adjustable from 0 – 60 bar, (3) oil reservoir, ≥5 litres	No.	2			

		<p>capacity having sight glass, drain screw, air filter, and P and T ports.</p> <ul style="list-style-type: none"> - Pressure relief valve, pilot-operated : 1 No. - Drip tray, steel: size 1160 mm x 760 mm: 1 No. - Pressure Gauge, Glycerine-damped, Indication range of 0 – 100 bar : 1 No. - Four-Way distributor with five ports, equipped with a pressure gauge : 1 No. - Double acting hydraulic cylinder with a control cam, Piston diameter 16 mm, Piston rod diameter 10 mm, Stroke Length 200 mm : 1 No. - Suitable Weight for vertical loading of hydraulic cylinder : 1 No. - Mounting kit for weight for realizing pulling and pushing load : 1 No. - 3/2-way directional control valve with hand lever actuation : 1 No. - 4/2-way directional control valve with hand lever actuation : 1 No. - 4/3-way directional control valve closed-centre position, with hand lever actuation : 1 No. - Non-return valve : 1 No. - Pilot-operated check valve pilot to open : 1 No. - One-way flow control valve with integrated check valve : 1 No. - T-Connector with self-sealing coupling nipples (2 Nos.) and quick coupling socket (1 No.) : 2 Nos. - Quick coupling socket (1 No.) : 1 No. - One Set of Profile plate, Anodised Aluminium, 1100x700 mm, with carriers, mounting frames and mounting 					
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		accessories (To be fitted onto the Hydraulic workstation) - All other items necessary for working of the hydraulic trainer for all experiments.					
30.	Pneumatic Trainer Kit with components and accessories	Pneumatic Trainer Kit, each consisting of the following matching components and accessories:: - Single acting cylinder, Max. stroke length 50 mm, Bore dia 20 mm : 1 No. - Double acting cylinder, Max. stroke length 100 mm, Bore dia 20 mm, magnetic type : 1 No. - 3/2-way valve, manually-actuated, Normally Closed : 2 Nos. - 3/2-way valve, pneumatically-actuated, spring return : 1 No. - One-way flow control valve : 2 Nos - 5/2-way valve, with manually-operated switch : 1 No. - 5/2-way valve, pneumatically-actuated, spring return : 1 No. - 5/2-way pneumatic actuated valve, double pilot : 1 No. - 3/2-way roller lever valve, direct actuation Normally Closed : 2 Nos - Shuttle valve (OR) : 1 No. - Two-pressure valve (AND) : 1 No. - Non-return valve : 1 No.. - Pressure gauge, 0-16 bar : 1 No. - Manifold with self-closing, NRV, 6-way : 1 No. - Pushbutton station for electrical signal input with 3 illuminated momentary-contact switches (1 NO + 1 NC) and 1 illuminated maintained-contact switch (1 NO + 1 NC), Contact load 2A : 1 No.	No.	2			

		<ul style="list-style-type: none"> - Relay station with 3 relays each with 4 contact sets (3NO+1NC or Change-over type), 5 A : 1 No. - 5/2-way single solenoid valve with manual override and LED : 1 No. - 5/2-way double solenoid valve with manual override and LED : 1 No. - Power supply unit, Input voltage 85 – 265 V AC, Output voltage: 24 V DC, Output current: max. 4.5 A, short-circuit-proof : 1 No. - One Set of Profile plate, Anodised Aluminium 1100x700 mm, with carriers, mounting frames and mounting accessories (To be fitted onto the pneumatic workstation) - All other items necessary for working of the Pneumatic trainer for all experiments. 					
31.	Wheel Dresser Hunting on-type with star cutter	Wheel Dresser: <ul style="list-style-type: none"> - Type: Hunting on with minimum Two-star cutter - Dresser Wheel Range: - Dresser Length: 255-320mm - Cutter Diameter: 32-60 mm 	No.	2			
32.	Wheel Dresser Diamond - inserted-0.75 or 1 Carat.	Wheel Dresser Diamond: <ul style="list-style-type: none"> - Minimum Dia : 12 mm - Minimum Length : 135-150 mm - Diamond : inserted-0.75 or 1 Carat 	No.	1			
33.	Screw Thread micrometre interchangeable 0-25 mm	Screw Thread micrometre interchangeable: <ul style="list-style-type: none"> - Range: 0 -25mm, - Graduation: 0.01mm, - Accuracy : +/- 0.004 mm - Made of high-grade steel, 	No.	2			

		hardened and precision ground - With Ratchet stop for constant force - Rugged blow moulded hard case					
34.	Morse Taper Plug & Ring Gauge	Morse Taper Plug & Ring Gauge - No. 0 to 7 MT : - Large End (Inches) : .3561, 0.4750, 0.7000, 0.9380, 1.2310, 1.500, 1.7480, 2.4940 - Small End (Inches) : .2520, 0.3690, 0.5720, 0.7780, 1.0200, 1.2660, 1.4750, 2.1160 - Length(Inches): 2.0, 2.250, 2.5625, 3.1875, 4.125, 4.5, 5.1875, 7.250 - Set of 8 Nos - With Ring	No.	1			
35.	Sine Bar with centers	Sine Bar with centers: - Roller Center distance: 200 mm - Material: Alloy Steel Hardened to 55-60 HRC and Ground - Rugged blow moulded hard case	No.	1			
36.	Slip Gauge metric set of 87 pieces in a Box with workshop grade	Slip Gauge metric set of 87 pieces in a Box with workshop grade: - 9 Block ; 1.005-1.009 mm in Step of 0.001 mm - 49 Block ; 1.01-1.49 mm in Step of 0.01 mm - 19 Block ; 0.50-9.50 mm in Step of 0.50 mm - 10 Block ; 10-100 mm in Step of 10 mm - Made of high quality alloy steel, - Slightly rounded edges.	No.	2			

		<ul style="list-style-type: none"> - Each gauge block is marked with an identification number. - Gauge block hardness is 64 HRC for high wear resistance. 					
37.	Morse Taper Sleeves No. 0-1, 1-2, 2-3, 3-4, 4-5.	Morse Taper Sleeves No :0,1,2,3,4,5(6 Nos) <ul style="list-style-type: none"> - Taper (In MM):1:19.212, 1:20.047, 1:20.020, 1:19.922, 1:19.254, 1:19.002 - Sleeves made of HSS, hardened & grounded with a high finish 	No.	2			
38.	Drill Drift	Drill Drift : <ul style="list-style-type: none"> - Size : 5-10 mm - Length (mm) 100-150 mm - Material : High Carbon Steel - Wedge shape - Fully hardened 	No.	1			
39.	Twist Drill	Twist Drill Set <ul style="list-style-type: none"> - Size : 3 mm to 12 mm by 1 mm - Material : High Speed Steel(HSS) - Straight shank spiral flute - Rugged blow moulded hard case 	No.	1			
40.	Drill Twist Set	Twist Drill Set <ul style="list-style-type: none"> - Size : 14 mm to 20 mm by 1 mm - Material : High Speed Steel(HSS) -Taper shank spiral flute - Rugged blow moulded hard case 	No.	1			
41.	Drill Chuck	Drill Chuck: <ul style="list-style-type: none"> - Capacity : 1.5 -12mm - Mount Range :1/2" -20 - Type :keyed chuck - Functional components made from steel - Hardened and ground 	No.	1			

42.	Grinding Wheel Ajax type for carbide tool	Grinding Wheel: <ul style="list-style-type: none"> - Type: Ajax - Wheel diameter: 200 MM - Minimum Wheel Width: 25 MM - Bore Dia: 32 MM - Abrasive Material: Silicon Carbide - Grain Size: Medium - Bond Type: Vitrified 	No.	2			
43.	Angle Gauge for tool grinding	Angle Gauge for tool grinding: <ul style="list-style-type: none"> - Overall Length: Minimum 80 mm. - Material: Polished Stainless Steel. - Measures Square & hexagonal angles of 120°, 118°, 90°, 60°, 55° 	No.	1			
44.	Hand Chaser M-12 & M-16 (ExterStandardI)	Hand Chaser (ExterStandardI) <ul style="list-style-type: none"> - Size : M-12 & M-16 - Material : HSS - Rugged blow moulded hard case 	No.	6			
45.	Hand Chaser M-12 & M-16 (InterStandardI)	Hand Chaser (ExterStandardI) <ul style="list-style-type: none"> - Size : M-12 & M-16 - Material : HSS - Rugged blow moulded hard case 	No.	2			
46.	Revolving Center to suit Lathe tailstock	Revolving Center to suit Lathe tailstock: <ul style="list-style-type: none"> - Suitable for Lathe's Tailstock of MT3 Taper Type - Made of carbon steel, Hardened & Ground 	No.	2			
47.	Tool Cemented carbide assorted shaped (ExterStandardI) for steel turning	Tool Cemented carbide assorted shaped (ExterStandardI) for steel turning : <ul style="list-style-type: none"> - Set of 12 Nos. - Material : Cemented carbide 	No.	6			

		- Rugged blow moulded hard case					
48.	Thread Plug Gauge	Thread Plug Gauge : - Size : M-20 & M-21 - Material : HSS	No.	1			
49.	Thread Ring Gauge	Thread Ring Gauge : - Size : M-20 & M-21 - Material : HSS	No.	1			
50.	Machine Chaser	Machine chase M-12 to M-24 (Std. Series) to suit on convery Die head - Size : M-12 TO M-21 (Std. Series) - Rugged blow moulded hard case	No.	1			
51.	Coventry Die head (Conventional Type)	Coventry Die Head : - Type : Conventional - Capacity : 10-24 mm - Cutting of threads Up To Dia : 30 mm - Shank Dia : Upto 40 MM - RH and LH thread - Parallel threads	No.	1			
52.	Gauge Drill Grinding Attachment :	Gauge Drill Grinding Attachment : - Capable of Sharpening of 3-19mm (1/8-3/4") HSS twist drill bits with a 75mm minimum length	No.	2			
53.	Magnetic Chuck 150 mm dia. - Circular type	Magnetic Chuck : - Type : Circular - Diameter : 150mm - Thickness : 70mm - Pole Width : 15mm - Pole Pitch : 29mm - No of Poles : 4 - Material : Mild steel	No.	1			

54.	Different Types of Lathe Mandrels	Different Types of Lathe Mandrels: - Size: 1/16" - 1/2" - Material : High Carbon Steel - Tapered : .0005" per inch - Hardened and ground.	No.	1			
55.	Coventry Type Die Head - Self opening	Coventry Die Head - Type : Self Opening - Capacity : 10-24 mm - Cutting of threads Up To Dia : 30 mm - Shank Dia : Upto 40 MM	No.	1			
56.	Collapsible Tap with attachment	Set of Collapsible Tap with attachment : - Capacity (mm): M3-M12, MT2-M8-M20 ,MT3	No.	1			
57.	Bore dial gauge stems 12 to 35 mm of 0.01 accuracy	Bore dial gauge : - Measurement System : Metric - Type : Analog - Range : 18 - 35 mm - Accuracy : 0.01 mm - Stainless steel ball contact point - Rugged blow moulded hard case	No.	2			
58.	Bore dial gauge stems 35 to 65 mm of 0.01 accuracy	Bore dial gauge : - Measurement System : Metric - Type : Analog - Range : 35- 65 mm - Accuracy : 0.01 mm - Stainless steel ball contact point - Rugged blow moulded hard case	No.	1			
59.	Lathe S.S. & S.C. - All geared head stock	Lathe S.S. & S.C. - All geared head stock : - Bed Type: Flat Bed - Height of Centre: 150 mm and	No.	1			

		<p>above</p> <ul style="list-style-type: none"> - Distance between centres: 750 mm and above - Swing Over bed: 450 mm and above - Swing over cross slide: 225 mm and above - Movement of cross slide: 225 mm and above - Movement of compound slide: 100 mm and above - Bed Width: 275 mm and above <p>Main & Spindle:</p> <ul style="list-style-type: none"> - Spindle nose: Threaded type, Dia 70 mm and above - Spindle Bore: Dia 50 mm and above <p>Tail Stock:</p> <ul style="list-style-type: none"> - Tail Stock Spindle/Quill Dia: 50 mm and above - Spindle Travel/Quill Traver: 140 mm and above <p>Speed:</p> <ul style="list-style-type: none"> - No. os spindle speeds: 8 Minimum - RPM/ Range: 80 - 1000 Minimum <p>Feed:</p> <ul style="list-style-type: none"> - Longitudinal Feeds & Range: 24/0.045 -0.63 mm/rev - Transverse feeds and Range: 24/0.015 -0.21mm/rev <p>Threads:</p> <ul style="list-style-type: none"> - Metric : Minimum 20, 0.5 - 7 mm - Inch: Minimum 24, 56-4 TPI <p>Electrical :</p> <ul style="list-style-type: none"> - Motor capacity: Minimum 5.5 KW - Power Supply: Three Phase, 415 - 440 V, 50 Hz 					
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60.	Lathe S.S. & S.C. - All geared head stock	Lathe S.S. & S.C. - All geared Type : - Bed Type: Flat Bed - Height of Centre: 150 mm and above - Distance between centres: 1000 mm and above - Swing Over bed: 450 mm and above - Swing over cross slide: 225 mm and above - Movement of cross slide: 225 mm and above - Movement of compound slide: 100 mm and above - Bed Width: 275 mm and above Main & Spindle: - Spindle nose: Threaded type, Dia 70 mm and above - Spindle Bore: Dia 50 mm and above Tail Stock: - Tail Stock Spindle/Quill Dia: 50 mm and above - Spindle Travel/Quill Traver: 140 mm and above Speed: - No. os spindle speeds: 8 Minimum - RPM/ Range: 80 - 1000 Minimum Feed: - Longitudinal Feeds & Range: 24/0.045 -0.63 mm/rev	No.	5			

		<ul style="list-style-type: none"> - Transverse feeds and Range: 24/0.015 -0.21mm/rev Threads: <ul style="list-style-type: none"> - Metric : Minimum 20, 0.5 - 7 mm - Inch: Minimum 24, 56-4 TPI Electrical : <ul style="list-style-type: none"> - Motor capacity: Minimum 5.5 KW - Power Supply: Three Phase, 415 - 440 V, 50 Hz 					
61.	Lathe tool room S.S. & S.C. - All geared Type	Lathe tool room S.S. & S.C. (All geared Type) : <ul style="list-style-type: none"> - Bed Type: Flat Bed - Height of Centre: 150 mm and above - Distance between centres: 1000 mm and above - Swing Over bed: 450 mm and above - Swing over cross slide: 225 mm and above - Movement of cross slide: 225 mm and above - Movement of compound slide: 100 mm and above - Bed Width: 275 mm and above Main & Spindle: <ul style="list-style-type: none"> - Spindle nose: Threaded type, Dia 70 mm and above - Spindle Bore: Dia 50 mm and above Tail Stock: <ul style="list-style-type: none"> - Tail Stock Spindle/Quill Dia: 50 	No.	1			

		mm and above - Spindle Travel/Quill Traver: 140 mm and above Speed: - No. os spindle speeds: 8 Minimum - RPM/ Range: 80 - 1000 Minimum Feed: - Longitudinal Feeds & Range: 24/0.045 -0.63 mm/rev - Transverse feeds and Range: 24/0.015 -0.21mm/rev Threads: - Metric : Minimum 20, 0.5 - 7 mm - Inch: Minimum 24, 56-4 TPI Electrical : - Motor capacity: Minimum 5.5 KW - Power Supply: Three Phase, 415 - 440 V, 50 Hz					
62.	Grinding machine pedestal type D.E. 200 mm dia. Wheel with wheel guard and vision, Motor Capacity - 0.75 KW	Grinding machine pedestal type Double Ended: - Minimum Grinding Wheel Diameter - 200 mm - No Load Speed minimum : 3000 RPM - Motor Power Minimum -0.75 KW -Two wheels rough and smooth - Adjustable spark detectors for safety - Adjustable shatter-proof eye shields - Thick wheel guards with built in dust chutes	No.	1			

63.	Drill machine pillar type-motorized	Pillar Drilling Machine : <ul style="list-style-type: none"> - Drilling Capacity :12 mm Max - Chuck Capacity :1.5-12 mm - Spindle Taper : Minimum MT-3 - Spindle Traverse : Minimum100mm - Distance between Spindle and Table : Minimum 300mm - Distance between Spindle and Base : Minimum 500MM - Table Working Surface Area : Minimum 200 x 200mm - Number of Spindle Speeds : Minimum 8 - Pillar Diameter : Minimum 57mm - Range of Spindle Speed :between 115 – 2060 rpm - Coolant System with Coolant Pump with tank - Main Motor : Minimum 0.75 KW - Operating Voltage: 440V, 3 Phase. 	No.	1			
64.	Power saw machine - hydraulic feed system 400 mm. Blade size, Motor Capacity -0.75 KW	Power saw machine - hydraulic feed system : <ul style="list-style-type: none"> - Cutting Capacity (Round) : Min. Upto 200mm - Cutting Capacity(Square): Min. Upto 150 mm - Length of Stroke: Minimum 140 mm - Stroke Per Minute : 80-125 - Blade Size : 400 mm 	No.	1			

		<ul style="list-style-type: none"> - Motor Capacity : Minimum 0.75 kw, 415 V, 3 Ph, 50 Hz - Power of coolant motor : Minimum 0.09 kW 					
65.	Digimatic Electronic Vernier Caliper	Digimatic Electronic Vernier Caliper: <ul style="list-style-type: none"> - Measuring Range : 0 - 200mm - Resolution :0.001mm - Accuracy : 0.001mm - Display : LCD/LED - Rugged blow moulded hard case - Suitable Battery for Operation 	No.	1			
66.	Digimatic electronic outside Micrometer 25 to 50 mm, LC 0.001 mm.	Digimatic electronic outside Micrometer : <ul style="list-style-type: none"> - Measuring Range : 25-50 mm - Resolution :0.001mm - Accuracy : 0.001mm - Display : LCD - Rugged blow moulded hard case - Suitable Battery for Operation 	No.	2			
67.	Plumbers Ladle	Plumbers Ladle: <ul style="list-style-type: none"> - 3" tp 4 " Bowl Diameter - 14" to 16" Integrated Metal Handle - Pour spout on both sides 	No.	1			
68.	Manually operated Pipe Bender.	Manually operated Pipe Bender: <ul style="list-style-type: none"> - Type : Manual - Size : 12 to 30 mm - Capacity of Pipe Bending Thickness : 2.5-6 mm 	No.	2			
69.	Portable forge ,450mm with hand blower.	Portable forge 450mm with hand blower : <ul style="list-style-type: none"> - Size : 450 MM 	No.	1			

		<ul style="list-style-type: none"> - Height : Minimum 750 MM - Blower Type – centrifugal blower Hand Operated 					
70.	Water closet (Indian type) complete with over head cistern	Water closet (Indian type) complete with over head cistern <ul style="list-style-type: none"> - Closet Material : Ceramic - Minimum Size : 500x380x250 mm Cistern : <ul style="list-style-type: none"> - Capacity : Minimum 10 Ltrs - Cistern Material : PVC - Complete fittings of Cistern(Float Valve and Connection Hoses) - Suitable angles & bolts for fixing 	No.	3			
71.	Urinal wall mounting type complete with Auto Urinal Sensor Flusher	Urinal wall type with Division Plate with Auto Urinal Sensor Flusher : <ul style="list-style-type: none"> - Urinal Size : Minimum 400X390x600mm - Type : Flat Back - Division Plate Size : Minimum 80X300X700 mm - Colour : White/Ivory - Material : Ceramic Urinal Sensor Flusher : <ul style="list-style-type: none"> - Sensing range: 200- 600mm adjustable - Flush Volume : 1 to 4 L - Water Pressure: 0.1 to 0.7 MPa - Inlet Outlet orifice : 15 mm - Suitable angles & bolts for fixing - Fitted with CP Waste of suitable size 	No.	1			

72.	Water meter	Water Meter: - Range: 0-400 ltr/min - Material : Brass - Dial Type : Analog - Size : 1/2" to 1 " - Operating Pressure : 5 to 10 bar	No.	1			
73.	Double Ended pedestal Grinding machine with 175mm wheel.	Pedestal Grinder, Double Ended: -Two wheels one rough and one smooth - Grinding Wheel Diameter: 175 mm each - No load Speed: Minimum 1500 RPM - Motor Capacity: Minimum 0.5 HP	No.	2			
74.	Hydraulic pressure machine for testing leakage in GI pipe fittings	Machine for testing leakage in GI pipe fittings (1/2" to 2") - Power : Hydraulic - Working Pressure : 60 Bar	No.	1			
75.	Sight rail and bonning rod	Sight rail and bonning rod Bonning rod(Set of 3) - T-Shaped - Size : 1000x600x50 mm - Material :Wood (First Class) Sight rail : - consist of horizontal cross piece nailed to a single upright or pair of uprights driven into the ground.	No.	1			
76.	Bench type Electric Motorized Drilling Machine of 15 mm capacity	Bench Drilling Machine : - Drilling Capacity: 15 mm - Chuck Capacity 1.5-15 mm - Minimum spindle travel :80 mm - Spindle taper: Solid - Minimum No. of spindle speed : 2 - Range of spindle speed:500-2825	No.	1			

		rpm - Electric Motor: Minimum 0.5 H.P, 3 Phase						
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Note: For detailed specifications please refer Table:3 Technical Specifications

2. Delivery and Completion Schedule

The delivery period shall start as of *date of Signing the Contract*

Item No	Description of Goods or Related Services	Delivery Schedule (Duration)	Location	Required Arrival Date of Goods or Completion Date for Related Services
1 to 76	As per Schedule 1 – List of Goods and Related Services	Within 365 Days from the Signing of the contract.	The location of Delivery of various items attached separately	Within 365 Days from the Signing of the contract.

3. Technical Specifications

Special Note: 1	As a part of Documentation even if not mentioned all items supplied shall have minimum of 1. User/Operation Manual and 2. Warranty Certificate. Additional requirements for specific items will be explicitly mentioned.
Special Note: 2	The installation has to be carried out as per the guidelines given by the OEM with necessary groundwork and fixtures wherever necessary.
Special Note: 3	All Light, Medium and Heavy machineries and item needing installation either on Ground or on Wall is the sole responsibility of the supplier.
Special Note: 4	All costs involved in installation such as materials and Labour is to be borne by the Supplier.
Special Note: 5	Machines and items shall be installed at the identified position in the designated ITI workshop /Laboratory.
Special Note: 6	Warranty of One/Two/.. / means that the Supplier of the item takes full responsibility in ensuring the best working condition of the item during the warranty period.
Special Note: 7	In the event the item is not working the OEM ensure that the item is brought back to best working condition with-in a reasonable period of time not more than 5 days in the worst case.
Special Note: 8	All parts of the machine not intentionally damaged by the user should be replaced free of cost by the supplier.
Special Note: 9	All consumable items if any needing replacement will be supplied by the ITI.
Special Note: 10	All Items of delicate nature shall be supplied in a suitable Cloth/Wooden/ Other suitable storage case/cover for protection of the item from dust and moisture.
Special Note: 11	Detailed information brochures having specifications, make and model number of individual items to be attached.

Item No.	Name of Goods or Related Services	Technical Specifications of Item and/or Bureau of Indian Standards (BIS) (if applicable) reference	Features	Accessories	Spare parts	Documents	Installation & Training	Warranty of equipment/parts
1.	Pillar Type Electric Motorized Drilling machine of 20 mm Capacity	Pillar Type Drilling machine: <ul style="list-style-type: none"> - Drilling Capacity : 20mm Max - Chuck Capacity : 0-20 mm - Spindle Taper : Minimum MT-3 - Spindle Traverse : Minimum 100mm - Distance between Spindle and Table: Minimum 300mm - Distance between Spindle and Base : Minimum 500 mm - Table Working Surface Area : Minimum 200 x 200 mm - Swivel Table - Number of Spindle Speeds: at least 8, - Pillar Diameter: Minimum 57mm 	- A Sturdy & heavy body made up of cast steel & having a solid pillar, hardened & chrome plated/spray painted with a heavy base enough to withstand impact & load	- Standard accessories - All the tools & keys required to operate the machine with attachments - Suitable Starter / DOL	- Standard	- User/Operating Manual - List of Service Centres in India - Warranty Certificates	- To be installed at designated ITI's in Himachal Pradesh - Training as required by staff of ITI	One Year

		<ul style="list-style-type: none"> - Spindle Speed - between 115 rpm – 2060 rpm or Higher - Coolant System with Coolant Pump with tank. - Main Motor not less than 1HP - Operating Voltage: 440V, 3 Phase. - Suitable Starter with all safety gadgets. - Suitable capacity electric cable of minimum 5 meter length for connecting with 440V, 3 phase supply 						
2.	Motorised Bench Grinder	Motorised Bench Grinder : <ul style="list-style-type: none"> - Grinding Wheel Diameter : Minimum 150mm - Double sided - Two wheels rough and smooth with Tool Base - No Load Speed : 1500-3600 rpm - Operating Voltage: 440 V , 3 phase - Motor Power : Minimum 1 HP - Suitable DOL Starter with all safety gadgets. - Suitable capacity electric cable of minimum 5 meter length for connecting with 440V, 3 phase supply 	<ul style="list-style-type: none"> - Sealed and pre-lubrication Ball Bearings - Balance Motor for smooth operation - Adjustable spark detectors for safety, - Adjustable shatter-proof eye shields - Thick wheel guards with built in dust chutes 	<ul style="list-style-type: none"> - All Standard Accessories and DOL Starter 	<ul style="list-style-type: none"> - one set of rough & smooth grinding wheels suitable to the Grinder 	<ul style="list-style-type: none"> - User/Operating Manual - List of Service Centres in India - Warranty Certificate 	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI 	One Year
3.	Bench type Electric Motorized Drilling Machine of 12 mm capacity	Bench Drilling Machine : <ul style="list-style-type: none"> - Drilling Capacity: 12 mm - Chuck Capacity 1.5-12 mm - Minimum spindle travel :80 mm - Spindle taper: Solid - Minimum No. of spindle speed : 2 - Range of spindle speed:500-3000 rpm - Electric Motor: Minimum 0.5 H.P, 3 Phase - Suitable capacity electric cable of minimum 5 meter length for connecting with 440V, 3 phase supply 	<ul style="list-style-type: none"> - A Sturdy metallic body hardened & chrome plated/spray painted with a heavy base enough to withstand impact & load. 	<ul style="list-style-type: none"> - Standard accessories - All the tools & keys required to operate the machine with attachments. - Suitable Starter 	Standard	<ul style="list-style-type: none"> - User/Operating Manual - List of Service Centres in India - Warranty Certificate 	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI 	One Year

4.	Double Ended pedestal Grinding machine with 250mm wheels.	Pedestal Grinder, Double Ended : <ul style="list-style-type: none"> -Two wheels one rough and one smooth - Grinding Wheel Diameter : 250 mm each - Thick wheel guards with built in dust chutes - No load Speed : Minimum 1500 RPM - Operating Voltage :440 V , 3Phase - Motor Capacity: Minimum 2 HP - Adjustable spark detectors for safety - Adjustable shatter-proof eye shields - Thick wheel guards with built in dust chutes - Suitable capacity electric cable of minimum 5 meter length for connecting with 440V, 3 phase supply 	<ul style="list-style-type: none"> - Sealed and pre-lubrication Ball Bearings -Balance Motor for smooth operation 	- Standard	- one set of rough & smooth grinding wheels suitable to the Grinder	<ul style="list-style-type: none"> - User/Operating Manual - List of Service Centres in India - Warranty Certificates 	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI 	One Year
5.	Transformer welding set - continuous welding current, with all accessories and electrode holder 60% Duty Cycle with Standard Accessories	Transformer welding set: <ul style="list-style-type: none"> - Operating Voltage: 415-440V, 3 Phase - Open circuit voltage range: 60-100 V - Welding Current Range : 60 – 400A - Current @ 60% duty cycle 300A - Display of Current & Voltage Digital - Stepless and smooth variable current regulation. - Swivel front wheel and rear wheel arrangement. - Forced Air Cooling. - Suitable and safe On/Off switch control and Current control with indicators 	- Standard -	<ul style="list-style-type: none"> - Copper Welding Cable with Tough Rubber Size: 50 SQ MM (50 Mtrs) -Suitable Welding Lugs for 50 SQ mm - Welding Holder - Earth Clamp - Welder Face Shield - Welder Apron - Leather Gloves - All Other Standard Accessories 	- Standard	<ul style="list-style-type: none"> - User/Operating Manual - List of Service Centres in India - Warranty Certificates 	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI 	One Year
6.	Welder cable	Welder cable: <ul style="list-style-type: none"> - Size: 50 sq. mm - Material: copper with Tough Rubber - Length: 50 meters - Max Current carrying capacity: Not less 	- Standard -	- Storage Case -	- Standard	- Standard	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal 	One year

		than 400 Amps					Pradesh - Training as required by staff of ITI	
7.	Earth clamps	Heavy duty earth clamp for welding: - Jaw opening up to 60 mm. - Zinc coated steel with copper plated jaws and copper mesh.	- Standard	- Standard	- Standard	- Standard	- To be supplied at designated ITI's in Himachal Pradesh	one year
8.	Oxy - acetylene gas welding set equipment with hoses, Oxygen & Acetylene cylinders, regulator and other accessories.	Oxy - acetylene gas welding set equipment consisting of : - Oxygen cylinder of standard industrial Capacity - Acetylene cylinder of standard Industrial Capacity - Double stage oxygen regulator - Double stage acetylene regulator - Oxygen & Acetylene Flashback arrestor for Cylinder and Torch - Twin hoses(Acetylene & Oxygen)10m Each - Welding torch with Nozzles - Twin Cylinders Trolley Complete oxy-acetylene welding kit to handle a broad range of cutting, welding, and heating applications. With hoses, welding and cutting torches, goggles, tip cleaners and striker packed in a heavy-duty moulded storage case. Professional-quality Victor-style torch All-brass torch handle and check valves Brass and steel cutting torch attachment Brass and copper welding/heating tip CGA 540 oxygen regulator CGA510 acetylene regulator 12 ft. x 1/4 in. ID R-grade oxygen and Acetylene hoses for oxygen acetylene cylinder.	- Standard	- Spark lighter - Tip cleaner - Cylinder key - Welding goggle - Suitable spanners - All Other Standard Accessories torch handle, cutting attachment, oxygen and acetylene compressed gas regulators, 3-101 #0 cutting tip, VM-W #0 welding nozzle, 1/4 in. x 12-1/2 ft. twin welding hose with 1/4 in. fittings,	Contact Tip 1.2MM,0.8 MM Gas Diffuser Gas Nozzle Anti-Spatter Spray	- User/Operating Manual - Warranty Certificate	- To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI Onsite Operational handover training and live demo atleast for one hours	one year

				goggles, flint striker, tip cleaner, spare O-ring and carrying case				
9.	Gas welding table with positioner with Fire Bricks 900 X 600 X 750 mm	Gas welding table with positioner with Fire Bricks - Size: 900 X 600 X 750 mm made with 40 x 40 x 4 mm angle iron and top tray covered with 5mm MS sheet, with positioner suitable for all weld positions. - Top tray covered with refractory bricks- Refer Specification as per Drawing No DWG-MM-01 Attached- Gas Welding Table Spray Painted	- Standard	- Standard	- Standard	- User/Operating Manual - Warranty Certificate	- To be supplied at designated ITI's in Himachal Pradesh- Training as required by staff of ITI	one year
10.	Gas Welding Table with fire bricks top and stand	Gas welding table with positioner : - With Fire Bricks - Size : 1220 X760 mm made with 40 x 40 x 4 mm angle iron and top tray covered with 5mm MS sheet with positioner suitable for all weld positions. - Top tray covered with refractory bricks - Refer Specification as per Drawing No DWG-MM-03 Attached. - Gas Welding Table Spray Painted	standard	standard	standard	standard	- Standard	One year
11.	Welding torch tips of different sizes for Oxy- acetylene gas welding	Welding torch tips: - Welding torch tips of different sizes for Oxy-acetylene gas welding to fit nozzle no. 1, 2, & 3	- Standard	- Standard	- Standard	- User/Operating Manual - Warranty Certificate	- To be supplied at designated ITI's in Himachal Pradesh	one year
12.	Spark lighter for Gas Welding	Spark Lighter for Gas Welding - Spark Lighter used for Gas Welding & Cutting - Made of Stainless steel	- Standard	- Standard	- Standard	- User/Operating Manual - Warranty Certificate	- To be supplied at designated ITI's in Himachal Pradesh	one year
13.	Trolley for Twin gas cylinders.	-Trolley for Twin gas cylinders - To carry Two Cylinders of standard Industrial Capacity. - Movable trolley with solid tyre wheels. - refer Specification as per Drawing No DWG-MM-02 Attached	- Standard	- Standard	- Standard	- Warranty Certificate	- To be supplied at designated ITI's in Himachal Pradesh	one year

14.	Welding torches.	Welding Torch for Oxy-Acetylene with Nozzles no. 1, 2, & 3 - Material of Torch: Brass	- Standard -	- Standard	- Standard	- Warranty Certificate	- To be supplied at designated ITI's in Himachal Pradesh	one year
15.	Anvil 50 Kgs with Stand	Anvil with Stand: - Made up of Solid cast steel hardened and tempered. - Single Horn Anvil With Curved Base Size/Working Area at least 12 Sq. Inches - Weight: 50 KGs - 45-60 Rockwell Hardness is required - Fine finish and corrosion free - Suitable and sturdy Anvil Stand	- Standard	- Standard	- Standard	- Hardness Test Certificate - Warranty Certificate	- To be supplied at designated ITI's in Himachal Pradesh	one year
16.	Arbor press hand operated 2-ton capacity	Arbor Press: - Mechanical Type hand operated with attachments. - Precision cut steel rams and pinions for accurate operation - Tables and slotted table-plates should be flat and parallel to provide accurate support - Pressure Capacity: 2 tons - Rust Proof	- Standard	- Standard	- Standard	- User/Operating Manual - Warranty Certificate - Training as required at the institute.	To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI	one year
17.	Pipe bender (Hydraulic type)	Dies: 1/2,3/4,1,1.1/4,1.1/2,2,2.1/2,3,4 Inch, Size (inch): ½ to 4, Thickness : 2.5mm – 6mm,	Easy operation, Reasonable price, Pipe bender (Hydraulic type)	- Adjustable bar rest -Clamping - Adjustable stopper for bar	Standard	operational / Maintenance manuals Required	Onsite Operational handover training and live demo atleast for one time.	One year

18.	Chain Pulley Block of 3-ton capacity with tripod stand	Chain Pulley Block with compatible tripod stand: <ul style="list-style-type: none"> - Capacity :3 Ton Tripod Stand Specifications : <ul style="list-style-type: none"> - Capacity to lift minimum 3 Ton of load - Minimum Height to Eye : 3000 mm - Minimum Leg Length : 3400 mm - Legs should be Adjustable for uneven level ground, shallow slopes and slight inclines. - Feet Should be suitable for hard and soft ground. 	- Standard	- Standard	- Standard	<ul style="list-style-type: none"> - User/Operating Manual - Test Certificate from Competent Authority for Rated Load Capacity for Chain Pulley Block & tripod Stand. - List of Service Centres in India - Warranty Certificates 	<ul style="list-style-type: none"> - To be delivered at the designated Industrial Training Institute in Himachal Pradesh - Training as required by staff of ITI 	One Year
19.	Wash Basin (16"X14"X10") Equivalent metric	Wall Hung Wash Basin with full pedestal <ul style="list-style-type: none"> - Material: Ceramic - Size: (16"x14"x10") Equivalent metric - Suitable CP Waste pipe - Suitable angles & bolts for fixing 	- Color : White/Ivory	- Standard	- Standard	- Standard	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh 	- Standard
20.	Water closet (European, type p) complete with overhead cistern	Water closet (European, type p) complete with overhead cistern <ul style="list-style-type: none"> - Closet Material : Ceramic - Minimum Size : 480x350x380 mm Cistern : <ul style="list-style-type: none"> - Capacity : Minimum 10 Litres - Cistern Material : PVC - Complete fittings of Cistern(Float Valve and Connection Hoses) - Suitable angles & bolts for fixing 	- Colour : White/Ivory	- Standard	- Standard	- Standard	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh 	- Standard
21.	S.S. & S.C. Centre Lathe (All Geared)	S.S. & S.C. Centre Lathe(All Geared): <ul style="list-style-type: none"> - Bed Type: Flat Bed - Height of Centre: 150 mm and above - Distance between centres: 1000 mm and above - Swing Over bed: 450 mm and above - Swing over cross slide: 225 mm and above 	<ul style="list-style-type: none"> - Lighting arrangement - Auto Feed System - High quality metal undercounter 	<ul style="list-style-type: none"> - Three Jaw self centering chuck 150 mm min - Four jaw Independent 	- Standard	<ul style="list-style-type: none"> - User/Operating Manual - Warranty Certificates 	<ul style="list-style-type: none"> - To be supplied and installed at designated ITI's in Himachal 	- Two years from Date of Installation

		<ul style="list-style-type: none"> - Movement of cross slide: 225 mm and above - Movement of compound slide: 100 mm and above - Bed Width: 275 mm and above <p>Main & Spindle:</p> <ul style="list-style-type: none"> - Spindle nose: Threaded type, Dia 70 mm and above - Spindle Bore: Dia 50 mm and above <p>Tail Stock:</p> <ul style="list-style-type: none"> - Tail Stock Spindle/Quill Dia: 50 mm and above - Spindle Travel/Quill Traver: 140 mm and above <p>Speed:</p> <ul style="list-style-type: none"> - No. os spindle speeds: 8 Minimum - RPM/ Range: 80 - 1000 Minimum <p>Feed:</p> <ul style="list-style-type: none"> - Longitudinal Feeds & Range: 24/0.045 - 0.63 mm/rev - Transverse feeds and Range: 24/0.015 - 0.21mm/rev <p>Threads:</p> <ul style="list-style-type: none"> - Metric : Minimum 20, 0.5 - 7 mm - Inch: Minimum 24, 56-4 TPI <p>Electrical :</p> <ul style="list-style-type: none"> - Motor capacity: Minimum 5.5 KW - Power Supply: Three Phase, 415 - 440 V, 50 Hz 	<ul style="list-style-type: none"> anodized or Powder coated - Bed made of 25 grade Cast iron with hardness of 400 BHN. - Headstock fitted with induction hardened and grounded spindle made from alloy steel. - Apron is totally enclosed with oil bath system with lever type arrangement for automatic feeds. - Emergency brake system - Tail stock hardened and ground, tail stock spindle made from alloy steel. - One piece complete stand. - Induction hardened bedway - Metallic covers and telescopic covers for guideways protection. - Servo gear system - Quick change 	<ul style="list-style-type: none"> chuck 150 mm min - Face Plate, Driving Plate - 4-way tool post, - Safety Guards - quick change gear box for Metric or British threads - live and dead centers fixed and revolving type - Taper turning attachment - Dog carriers - Steady rest, Follow rest - Gear cutting attachment. - Square Quick changing tool post - Multi position Quick changing tool post - Mandrals,Cat heads, Chuck key, 				<p>Pradesh</p> <ul style="list-style-type: none"> - Training as required by staff of ITI 	
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			gear mechanism - Over load protection system in Motors - A Generous Coolant Supply should be Provided with an Electric Coolant Pump Fitted on a Tank Through a Piping and a Nozzle	Tool post key, Spiders, Drill chuck with sleeve and socket, Tool Holders, Cutting off Tool holders, Boring bars and holders, Tool Post grinders, Thread chasing dial Cutting Tools: - HSS Single Point cutting tools - HSS Knurling tool, Threading tools - Right hand and left hand Turning tools, Diamond Point cutting tool, Parting off tool, Tool holder with set/Range of ceramic inserts of different shapes and sizes for turning, facing					
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				,Forming tools, Cutting tool shanks, Set of taper mandrals/ar bors, Taper pins				
22.	Arc welding table with all metal top and with positioner.	Arc welding table with positioner - Size: 1200X1200 X 750 mm - Made with 40 x 40 x 4 mm angle iron with positioner suitable for all weld positions. - All Metal Top - Refer Specification as per Drawing No DWG-MM-07 Attached - - The Arc welding table should be suitably painted	- Standard	- Standard	- Standard	- Standard	- To be supplied at designated ITI's in Himachal Pradesh	one year
23.	Compressor Unit of 8 Bar capacity	Compressor Unit (Horizontal): - Type : Reciprocating - Suitable for Pressure: Min 8 bar, - Delivery: 50 lpm (or more), - Reservoir capacity: 24 Litres (or more), - With Pressure regulator and water separator - protective enclosed belt guard - Overload motor protection - Accessible drain valve and - Automatic start/stop pressure switch control - Cast Iron Cylinder and frame - Operating Voltage: 230V, 50 Hz,	- Heavy duty ergonomic handle and tyres for easy handling.	- Standard	-One Set of Filter Elements & V- Belts	- User/Operating Manual - List of Service Centres in India - Warranty Certificate - Test certificate from Competent Authority of Reservoir	- To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI	one year
24.	Cut section model for pneumatic components	Cut section model for pneumatic components: - Compressor - Filter - Oil/Water Separator - Ball Valve - Unloader Valve, - Solenoid Valve, - Relay Valve, - Air Drier	- Standard -	- Standard	- Standard	- User/Operating Manual - Warranty Certificate	-To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI	one year

		<ul style="list-style-type: none"> - Filter/Regular/Lubricator(FRL) - Other essential components of pneumatic - The sectioned parts to be complete in itself to demonstrate the internal construction details. - The Cut section model components should be mounted on a suitable frame. - The model shall have a detachable transparent fabric sheet all around for protection against dust and moisture. 						
25.	Cut-section models for hydraulic components	Cut section model for Hydraulic components: <ul style="list-style-type: none"> - Hydraulic pump - Accumulator - Solenoid Valve - Filter - Pressure Relief Valve - Directional Valve - Flow Control Valve - Check Valve - Hydraulic Cylinder - Other essential components of Hydraulic. - The sectioned parts to be complete in itself to demonstrate the internal construction details. - The Cut section model components should be mounted on a suitable frame. - The model shall have a detachable transparent fabric sheet all around for protection against dust and moisture. 	- Standard -	- Standard	- Standard	<ul style="list-style-type: none"> - User/Operating Manual - Warranty Certificate 	<ul style="list-style-type: none"> -To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI 	one year
26.	Trolley type portable air compressor single cylinder with 45 litres capacity Air tank, along with accessories with working pressure 6.5 kg/sq cm	Trolley type portable air compressor : <ul style="list-style-type: none"> - Cylinder : Single - Working Pressure: Min 6.5 Kg/sq cm - Reservoir capacity: Min. 45 Litres - Operating Voltage:230V, 50 Hz, - With pressure regulator and water separator - Protective enclosed belt guard - Overload motor protection - Accessible drain valve -Automatic start/stop pressure switch control 	<ul style="list-style-type: none"> - Heavy duty ergonomic handle and tires for easy handling. 	- Standard	-Spare One Set of Filter Elements & V- Belts	<ul style="list-style-type: none"> - User/Operating Manual - List of Service Centres in India - Warranty Certificate -Test Certificate from 	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI 	one year

						Competent Authority for Reservoir		
27.	Solar water heater system	Solar water heater system : - Type of Collector : Evacuated Tube Collectors (ETC) - Tube Dimensions : 47 – 1800 mm or 58 – 1800 mm or suitable - Inner Tank Materials : High-grade Stainless Steel - Outer Tank Materials : Stainless Steel / Powder Coated - Working Temperature : 65 degree C to 85 degree C - Tank Insulation : High-quality PUF - Tank Volume : Min. 200 Ltr - Stand Frame : Galvanized Powder Coated - Type of Circulation : Thermo Siphon -Type of Grommets : Silicon Rubbers	- Suitable for bore well water and hard water usage. - Withstands high pressure of cold water also minimize mixing of Hot and Cold water. - High transmissivity triple layered clog and choke free collector tubes.	-Standard	-Standard	- User/ operating manual - Warranty certificate	- To be supplied and installed at designated ITI's in Himachal Pradesh - Training as required by staff of ITI	One year
28.	Workstation with 40 square mm aluminium profile legs, wooden work surface, and one pedestal drawer unit having 5 drawers, each with handles and individual locks, on metallic full panel drawer slide	Hydraulic / Pneumatic Workstation - Workstation with 40 square mm aluminium profile legs, wooden work surface, and one pedestal drawer unit having 5 drawers, each with handles and individual locks, on metallic full panel drawer slide: - Work Table : Size(Approx.) L1200mmXW900mmXH900mm, with four castor wheels including two lockable wheels at the front side, (2) - Drawer : Size (Approx.) – L460mmxW495mm xH158mm each, and - Overall size of Drawer unit (Approx.) - L470mmxW495mmxH825mm - Drawer slide height (Approx.) :85mm.	- Standard	- Standard	- Standard	- Warranty Certificate	- To be supplied at designated ITI's in Himachal Pradesh	one year
29.	Hydraulic Trainer Kit with components and Accessories	Hydraulic Trainer Kit, each consisting of the following matching components and accessories: - One No. Hydraulic Power pack : with (1) external gear pump having a delivery rate of 2.5 lpm, (approx.) @ 1400 rpm operating pressure 60 bar, coupled to a single-phase AC motor (230 V AC)	- Standard	- Standard	- Standard	- User/Operating Manual - Warranty Certificate	- To be supplied and installed at designated ITI's in Himachal Pradesh	one year

		<p>having start capacitor and ON/OFF switch and overload protection, (2) pressure relief valve adjustable from 0 – 60 bar, (3) oil reservoir, ≥5 litres capacity having sight glass, drain screw, air filter, and P and T ports.</p> <ul style="list-style-type: none"> - Pressure relief valve, pilot-operated : 1 No. - Drip tray, steel: size 1160 mm x 760 mm: 1 No. - Pressure Gauge, Glycerine-damped, Indication range of 0 – 100 bar : 1 No. - Four-Way distributor with five ports, equipped with a pressure gauge : 1 No. - Double acting hydraulic cylinder with a control cam, Piston diameter 16 mm, Piston rod diameter 10 mm, Stroke Length 200 mm : 1 No. - Suitable Weight for vertical loading of hydraulic cylinder : 1 No. - Mounting kit for weight for realizing pulling and pushing load : 1 No. - 3/2-way directional control valve with hand lever actuation : 1 No. - 4/2-way directional control valve with hand lever actuation : 1 No. - 4/3-way directional control valve closed-centre position, with hand lever actuation : 1 No. - Non-return valve : 1 No. - Pilot-operated check valve pilot to open : 1 No. - One-way flow control valve with integrated check valve : 1 No. - T-Connector with self-sealing coupling nipples (2 Nos.) and quick coupling socket (1 No.) : 2 Nos. - Quick coupling socket (1 No.) : 1 No. - One Set of Profile plate, Anodised Aluminium, 1100x700 mm, with carriers, mounting frames and mounting accessories (To be fitted onto the Hydraulic workstation) - All other items necessary for working of the hydraulic trainer for all experiments. 					- Training as required by staff of ITI	
30.	Pneumatic Trainer Kit with components and accessories	<p>Pneumatic Trainer Kit, each consisting of the following matching components and accessories::</p> <ul style="list-style-type: none"> - Single acting cylinder, Max. stroke length 50 mm, Bore dia 20 mm : 1 No. - Double acting cylinder, Max. stroke length 100 mm, Bore dia 20 mm, magnetic type : 1 No. - 3/2-way valve, manually-actuated, Normally Closed : 2 Nos. 	- Standard	- Standard	- Standard	<ul style="list-style-type: none"> - User/Operating Manual - Warranty Certificate 	<ul style="list-style-type: none"> - To be supplied and installed at designated ITI's in Himachal Pradesh - Training as 	one year

		<ul style="list-style-type: none"> - 3/2-way valve, pneumatically-actuated, spring return : 1 No. - One-way flow control valve : 2 Nos - 5/2-way valve, with manually-operated switch : 1 No. - 5/2-way valve, pneumatically-actuated, spring return : 1 No. - 5/2-way pneumatic actuated valve, double pilot : 1 No. - 3/2-way roller lever valve, direct actuation Normally Closed : 2 Nos - Shuttle valve (OR) : 1 No. - Two-pressure valve (AND) : 1 No. - Non-return valve : 1 No.. - Pressure gauge, 0-16 bar : 1 No. - Manifold with self-closing, NRV, 6-way : 1 No. - Pushbutton station for electrical signal input with 3 illuminated momentary-contact switches (1 NO + 1 NC) and 1 illuminated maintained-contact switch (1 NO + 1 NC), Contact load 2A : 1 No. - Relay station with 3 relays each with 4 contact sets (3NO+1NC or Change-over type), 5 A : 1 No. - 5/2-way single solenoid valve with manual override and LED : 1 No. - 5/2-way double solenoid valve with manual override and LED : 1 No. - Power supply unit, Input voltage 85 – 265 V AC, Output voltage: 24 V DC, Output current: max. 4.5 A, short-circuit-proof : 1 No. - One Set of Profile plate, Anodised Aluminium 1100x700 mm, with carriers, mounting frames and mounting accessories (To be fitted onto the pneumatic workstation) - All other items necessary for working of the Pneumatic trainer for all experiments. 					required by staff of ITI	
31.	Wheel Dresser Hunting on-type with star cutter	Wheel Dresser: <ul style="list-style-type: none"> - Type: Hunting on with minimum Two-star cutter - Dresser Wheel Range: - Dresser Length: 255-320mm - Cutter Diameter: 32-60 mm 	- Standard	- Standard	- Standard	- Standard	- To be supplied at designated ITI's in Himachal Pradesh	One year

32.	Wheel Dresser Diamond - inserted-0.75 or 1 Carat.	Wheel Dresser Diamond: - Minimum Dia : 12 mm - Minimum Length : 135-150 mm - Diamond : inserted-0.75 or 1 Carat	- Standard	- Standard	- Standard	- Standard	- To be supplied at designated ITI's in Himachal Pradesh	One year
33.	Screw Thread micrometre interchangeable 0-25 mm	Screw Thread micrometre interchangeable: - Range: 0 -25mm, - Graduation: 0.01mm, - Accuracy : +/- 0.004 mm - Made of high-grade steel, hardened and precision ground - With Ratchet stop for constant force - Rugged blow moulded hard case	- Standard	- Standard	- Standard	- Calibration certificate - User/Operating Manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh	One year
34.	Morse Taper Plug & Ring Gauge	Morse Taper Plug & Ring Gauge - No. 0 to 7 MT : - Large End (Inches) : .3561,0.4750, 0.7000, 0.9380, 1.2310,1.500,1.7480,2.4940 - Small End (Inches) : .2520, 0.3690, 0.5720, 0.7780, 1.0200, 1.2660, 1.4750,2.1160 - Length(Inches):2.0, 2.250, 2.5625, 3.1875, 4.125, 4.5, 5.1875,7.250 - Set of 8 Nos - With Ring	- Suited to check standard & non-standard taper of bores & shafts	- Standard	- Standard	- Calibration certificate - User/Operating Manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh	One year
35.	Sine Bar with centers	Sine Bar with centers: - Roller Center distance: 200 mm - Material: Alloy Steel Hardened to 55-60 HRC and Ground - Rugged blow moulded hard case	- Standard	- Standard	- Standard	- Calibration certificate - User/Operating Manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh	One year
36.	Slip Gauge metric set of 87 pieces in a Box with workshop grade	Slip Gauge metric set of 87 pieces in a Box with workshop grade: - 9 Block ; 1.005-1.009 mm in Step of 0.001 mm - 49 Block ; 1.01-1.49 mm in Step of 0.01 mm - 19 Block ; 0.50-9.50 mm in Step of 0.50 mm - 10 Block ; 10-100 mm in Step of 10 mm	- Standard	- To be Supplied in wooden storage box	Standard	- Calibration certificate - User/Operating Manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh	One year

		<ul style="list-style-type: none"> - Made of high quality alloy steel, - Slightly rounded edges. - Each gauge block is marked with an identification number. - Gauge block hardness is 64 HRC for high wear resistance. 						
37.	Morse Taper Sleeves No. 0-1, 1-2, 2-3, 3-4, 4-5.	Morse Taper Sleeves No :0,1,2,3,4,5(6 Nos) <ul style="list-style-type: none"> - Taper (In MM):1:19.212, 1:20.047, 1:20.020, 1:19.922, 1:19.254, 1:19.002 - Sleeves made of HSS, hardened & grounded with a high finish 	- Standard	- To be Supplied in wooden storage box	Standard	<ul style="list-style-type: none"> - Calibration certificate - User/Operating Manual - Warranty Certificates 	- To be supplied at designated ITI's in Himachal Pradesh	One year
38.	Drill Drift	Drill Drift : <ul style="list-style-type: none"> - Size : 5-10 mm - Length (mm) 100-150 mm - Material : High Carbon Steel - Wedge shape - Fully hardened 	- Standard	Standard	Standard	<ul style="list-style-type: none"> - User/operating manual - Warranty Certificates 	- To be supplied at designated ITI's in Himachal Pradesh	One year
39.	Twist Drill	Twist Drill Set <ul style="list-style-type: none"> - Size : 3 mm to 12 mm by 1 mm - Material : High Speed Steel(HSS) - Straight shank spiral flute - Rugged blow moulded hard case 	- Standard	-Standard	-Standard	<ul style="list-style-type: none"> - User/Operating Manual 	- To be supplied at designated ITI's in Himachal Pradesh	One year
40.	Drill Twist Set	Twist Drill Set <ul style="list-style-type: none"> - Size : 14 mm to 20 mm by 1 mm - Material : High Speed Steel(HSS) -Taper shank spiral flute - Rugged blow moulded hard case 	- Standard	-Standard	-Standard	<ul style="list-style-type: none"> - User/Operating Manual 	- To be supplied at designated ITI's in Himachal Pradesh	One year
41.	Drill Chuck	Drill Chuck: <ul style="list-style-type: none"> - Capacity : 1.5 -12mm - Mount Range :1/2" -20 - Type :keyed chuck - Functional components made from steel - Hardened and ground 	- Standard	chuck key	Standard	<ul style="list-style-type: none"> - User/operating manual - Warranty Certificates 	- To be supplied at designated ITI's in Himachal Pradesh	One year
42.	Grinding Wheel Ajax type for carbide tool	Grinding Wheel: <ul style="list-style-type: none"> - Type: Ajax - Wheel diameter: 200 MM - Minimum Wheel Width: 25 MM - Bore Dia: 32 MM 	-Standard	-Standard	-Standard	-Standard	- To be supplied at designated ITI's in Himachal	One year

		<ul style="list-style-type: none"> - Abrasive Material: Silicon Carbide - Grain Size: Medium - Bond Type: Vitrified 					Pradesh	
43.	Angle Gauge for tool grinding	Angle Gauge for tool grinding: <ul style="list-style-type: none"> - Overall Length: Minimum 80 mm. - Material: Polished Stainless Steel. - Measures Square & hexagonal angles of 120°, 118°, 90°, 60°, 55° 	<ul style="list-style-type: none"> - Clearly etched graduations. - Combines twist drill grinding gages, thread gage. 	-Standard	-Standard	<ul style="list-style-type: none"> - User/operating manual - Warranty Certificates - Calibration certificate 	- To be supplied at designated ITI's in Himachal Pradesh	One year
44.	Hand Chaser M-12 & M-16 (ExterStandardI)	Hand Chaser (ExterStandardI) <ul style="list-style-type: none"> - Size : M-12 & M-16 - Material : HSS - Rugged blow moulded hard case 	<ul style="list-style-type: none"> - Repairs external threads 	- suitable handle for operation	-Standard	<ul style="list-style-type: none"> - User/operating manual - Warranty Certificates 	- To be supplied at designated ITI's in Himachal Pradesh	One year
45.	Hand Chaser M-12 & M-16 (InterStandardI)	Hand Chaser (ExterStandardI) <ul style="list-style-type: none"> - Size : M-12 & M-16 - Material : HSS - Rugged blow moulded hard case 	<ul style="list-style-type: none"> - Repairs Internal threads 	- suitable handle for operation	-Standard	<ul style="list-style-type: none"> - User/operating manual - Warranty Certificates 	- To be supplied at designated ITI's in Himachal Pradesh	One year
46.	Revolving Center to suit Lathe tailstock	Revolving Center to suit Lathe tailstock: <ul style="list-style-type: none"> - Suitable for Lathe's Tailstock of MT3 Taper Type - Made of carbon steel, Hardened & Ground 	<ul style="list-style-type: none"> - High quality ball bearings & taper bearing absorbs combined radial & thrusts load 	-Standard	-Standard	<ul style="list-style-type: none"> - User/operating manual - Warranty Certificates 	- To be supplied at designated ITI's in Himachal Pradesh	One year
47.	Tool Cemented carbide assorted shaped (ExterStandardI) for steel turning	Tool Cemented carbide assorted shaped (ExterStandardI) for steel turning : <ul style="list-style-type: none"> - Set of 12 Nos. - Material : Cemented carbide - Rugged blow moulded hard case 	<ul style="list-style-type: none"> - Standard 	-Standard	-Standard	-Standard	- To be supplied at designated ITI's in Himachal Pradesh	One Year
48.	Thread Plug Gauge	Thread Plug Gauge : <ul style="list-style-type: none"> - Size : M-20 & M-21 - Material : HSS 	<ul style="list-style-type: none"> - Capable of checking the accurate size of the thread without play and its fitability 	-Standard	-Standard	<ul style="list-style-type: none"> - User/operating manual - Warranty Certificates - Calibration 	- To be supplied at designated ITI's in Himachal Pradesh	One year

						certificate		
49.	Thread Ring Gauge	Thread Ring Gauge : - Size : M-20 & M-21 - Material : HSS	- Capable of checking the accurate size of the thread without play and its fitability	-Standard	-Standard	- User/operating manual - Warranty Certificates - Calibration certificate	- To be supplied at designated ITI's in Himachal Pradesh	One year
50.	Machine Chaser	Machine chase M-12 to M-24 (Std. Series) to suit on conventry Die head - Size : M-12 TO M-21 (Std. Series) - Rugged blow moulded hard case	- Repairs threads	-Standard	-Standard	- User/operating manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh	One year
51.	Coventry Die head (Conventional Type)	Coventry Die Head : - Type : Conventional - Capacity : 10-24 mm - Cutting of threads Up To Dia : 30 mm - Shank Dia : Upto 40 MM - RH and LH thread - Parallel threads	- Rugged construction - Accurate Pitch - Clean and smooth threads	-Standard	-Standard	- User/operating manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh	One year
52.	Gauge Drill Grinding Attachment:	Gauge Drill Grinding Attachment: - Capable of Sharpening of 3-19mm (1/8-3/4") HSS twist drill bits with a 75mm minimum length	- Features an angle gauge with pre-sets at 41° (Countersink), 49°, 59°, 68° and 88°	-Standard	-Standard	- User/operating manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI	One Year
53.	Magnetic Chuck 150 mm dia. - Circular type	Magnetic Chuck: - Type : Circular - Diameter : 150mm - Thickness : 70mm - Pole Width : 15mm - Pole Pitch : 29mm - No of Poles : 4	- Provision for fine adjustments when setting work piece. - Efficient lock shhould be	-Standard	-Standard	- User/operating manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh	One year

		- Material : Mild steel	provided. - Fine (close) Pole Pitch for firm clamping. - Easily operated ON- OFF lever. - Poles individually magnetized for full loading power.					
54.	Different Types of Lathe Mandrels	Different Types of Lathe Mandrels: - Size: 1/16" - 1/2" - Material : High Carbon Steel - Tapered : .0005" per inch - Hardened and ground.	- Standard	-Standard	-Standard	- Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh	One Year
55.	Coventry Type Die Head - Self opening	Coventry Die Head - Type : Self Opening - Capacity : 10-24 mm - Cutting of threads Up To Dia : 30 mm - Shank Dia : Upto 40 MM	- Rugged construction - Accurate Pitch - Clean and smooth threads - RH and LH thread - Parallel threads	-Standard	-Standard	- User/operati ng manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh	One year
56.	Collapsible Tap with attachment	Set of Collapsible Tap with attachment: - Capacity (mm): M3-M12, MT2- M8-M20, MT3	- Versatile Application - Right/Left Hand Tapping without Modification	- Torque Bar - Round Spanner - Allen Key - Cup Nut Tightening Rod	- Standard	- User/operati ng manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh	One Year
57.	Bore dial gauge stems 12 to 35 mm of 0.01 accuracy	Bore dial gauge : - Measurement System : Metric - Type : Analog - Range : 18 - 35 mm - Accuracy : 0.01 mm - Stainless steel ball contact point - Rugged blow moulded hard case	- One end of the measuring head is the movable probe, and the other end is the changeable probe which is	- Guide Bridge - Anvils Conversion Head	- Standard	- Calibration certificate - User/Operati ng Manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh	One Year

			changed according to the measured aperture					
58.	Bore dial gauge stems 35 to 65 mm of 0.01 accuracy	Bore dial gauge : <ul style="list-style-type: none"> - Measurement System : Metric - Type : Analog - Range : 35- 65 mm - Accuracy : 0.01 mm - Stainless steel ball contact point - Rugged blow moulded hard case 	<ul style="list-style-type: none"> - One end of the measuring head is the movable probe, and the other end is the changeable probe which is changed according to the measured aperture 	<ul style="list-style-type: none"> - Guide Bridge - Anvils Conversion Head 	- Standard	<ul style="list-style-type: none"> - Calibration certificate - User/Operating Manual - Warranty Certificates 	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh 	One Year
59.	Lathe S.S. & S.C. - All geared head stock	Lathe S.S. & S.C. - All geared head stock : <ul style="list-style-type: none"> - Bed Type: Flat Bed - Height of Centre: 150 mm and above - Distance between centres: 750 mm and above - Swing Over bed: 450 mm and above - Swing over cross slide: 225 mm and above - Movement of cross slide: 225 mm and above - Movement of compound slide: 100 mm and above - Bed Width: 275 mm and above Main & Spindle: <ul style="list-style-type: none"> - Spindle nose: Threaded type, Dia 70 mm and above - Spindle Bore: Dia 50 mm and above Tail Stock: <ul style="list-style-type: none"> - Tail Stock Spindle/Quill Dia: 50 mm and above - Spindle Travel/Quill Traver: 140 mm and above Speed: <ul style="list-style-type: none"> - No. os spindle speeds: 8 Minimum - RPM/ Range: 80 - 1000 Minimum 	<ul style="list-style-type: none"> - Lighting arrangement - Auto Feed System - High quality metal undercounter anodized or Powder coated - Bed made of 25 grade Cast iron with hardness of 400 BHN. - Headstock fitted with induction hardened and grounded spindle made from alloy steel. - Apron is totally enclosed with oil bath system with 	<ul style="list-style-type: none"> - Three Jaw self centering chuck 150 mm min ,fixed steady, traveling steady -Four jaw Independent chuck 150 mm min - Face Plate, Driving Plate - 4-way tool post, - quick change gear box for Metric or British threads - live and dead centers 	- Standard	<ul style="list-style-type: none"> - User/Operating Manual - Warranty Certificates 	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI 	- Two years from Date of Installation

		<p>Feed:</p> <ul style="list-style-type: none"> - Longitudinal Feeds & Range: 24/0.045 - 0.63 mm/rev - Transverse feeds and Range: 24/0.015 - 0.21mm/rev <p>Threads:</p> <ul style="list-style-type: none"> - Metric : Minimum 20, 0.5 - 7 mm - Inch: Minimum 24, 56-4 TPI <p>Electrical :</p> <ul style="list-style-type: none"> - Motor capacity: Minimum 5.5 KW - Power Supply: Three Phase, 415 - 440 V, 50 Hz 	<ul style="list-style-type: none"> lever type arrangement for automatic feeds. - Emergency brake system - Tail stock hardened and ground, tail stock spindle made from alloy steel. - One piece complete stand. - Induction hardened bedway - Metallic covers and telescopic covers for guideways protection. - Servo gear system - Quick change gear mechanism - Over load protection system in Motors - A Generous Coolant Supply should be Provided with an Electric Coolant Pump Fitted on a Tank Through a Piping and a Nozzle 	<ul style="list-style-type: none"> fixed and revolving type - Taper turning attachment - Dog carriers - Steady rest, Follow rest - Gear cutting attachment. - Square Quick changing tool post - Multi position Quick changing tool post - Mandrals, Cat heads, Chuck key, Tool post key, Spiders, Drill chuck with sleeve and socket, Tool Holders, Cutting off Tool holders, Boring bars and holders, Tool Post grinders, Thread chasing dial <p>Cutting Tools:</p> <ul style="list-style-type: none"> - HSS Single 				
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				Point cutting tools - HSS Knurling tool - Threading tools - Right hand and left hand Turning tools, Diamond Point cutting tool, Parting off tool, Tool holder with set/Range of ceramic inserts of different shapes and sizes for turning, facing ,Forming tools, Cutting tool shanks, Set of taper mandrals/ar bors, Taper pins				
60.	Lathe S.S. & S.C. - All geared head stock	Lathe S.S. & S.C. - All geared Type : - Bed Type: Flat Bed - Height of Centre: 150 mm and above - Distance between centres: 1000 mm and above - Swing Over bed: 450 mm and above - Swing over cross slide: 225 mm and above - Movement of cross slide: 225 mm and above	-Lighting arrangement - High quality metal undercounter anodized or Powder coated - Bed made of 25 grade Cast	- Three -jaw self-centering chuck 200 mm min fixed steady -Four -jaw independent chuck 250	- Standard	- User/Operating Manual - Warranty Certificates	- To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of	- Two years from Date of Installation

		<ul style="list-style-type: none"> - Movement of compound slide: 100 mm and above - Bed Width: 275 mm and above Main & Spindle: - Spindle nose: Threaded type, Dia 70 mm and above - Spindle Bore: Dia 50 mm and above Tail Stock: - Tail Stock Spindle/Quill Dia: 50 mm and above - Spindle Travel/Quill Traver: 140 mm and above Speed: - No. os spindle speeds: 8 Minimum - RPM/ Range: 80 - 1000 Minimum Feed: - Longitudinal Feeds & Range: 24/0.045 - 0.63 mm/rev - Transverse feeds and Range: 24/0.015 - 0.21mm/rev Threads: - Metric : Minimum 20, 0.5 - 7 mm - Inch: Minimum 24, 56-4 TPI Electrical : - Motor capacity: Minimum 5.5 KW - Power Supply: Three Phase, 415 - 440 V, 50 Hz 	<ul style="list-style-type: none"> iron with hardness of 400 BHN. - Headstock fitted with induction hardened and grounded spindle made from alloy steel. - Apron is totally enclosed with oil bath system with lever type arrangement for automatic feeds. - Emergency brake system - Tail stock hardened and ground, tail stock spindle made from alloy steel. - One piece complete stand. - Induction hardened bedway - Auto Feed System - Metallic covers and telescopic covers for guideways protection. -servo gear system - Quick change gear mechanism 	<ul style="list-style-type: none"> mm min - Face Plate, Driving Plate - 4-way tool post - quick change gear box for Metric or British threads - live and dead centers fixed and revolving type - Taper turning attachment - Dog carriers - Steady rest, Follow rest - Gear cutting attachment. - Square Quick changing tool post - Multi position Quick changing tool post - Mandrals, Cat heads, Chuck key, Tool post key, Spiders, Drill chuck with sleeve 			ITI	
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			<ul style="list-style-type: none"> - Over load protection system in Motors - A Generous Coolant Supply should be Provided with an Electric Coolant Pump Fitted on a Tank Through a Piping and a Nozzle 	and socket, Tool Holders, Cutting off Tool holders, Boring bars and holders, Tool Post grinders, Thread chasing dial Cutting Tools: <ul style="list-style-type: none"> - HSS Single Point cutting tools - HSS Knurling tool - Threading tools - Right hand and left hand Turning tools, Diamond Point cutting tool, Parting off tool, Tool holder with set/Range of ceramic inserts of different shapes and sizes for turning, facing ,Forming tools, Cutting tool shanks, Set of taper mandrals/ 				
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				arbors, Taper pins				
61.	Lathe tool room S.S. & S.C. - All geared Type	Lathe tool room S.S. & S.C. (All geared Type) : <ul style="list-style-type: none"> - Bed Type: Flat Bed - Height of Centre: 150 mm and above - Distance between centres: 1000 mm and above - Swing Over bed: 450 mm and above - Swing over cross slide: 225 mm and above - Movement of cross slide: 225 mm and above - Movement of compound slide: 100 mm and above - Bed Width: 275 mm and above Main & Spindle: <ul style="list-style-type: none"> - Spindle nose: Threaded type, Dia 70 mm and above - Spindle Bore: Dia 50 mm and above Tail Stock: <ul style="list-style-type: none"> - Tail Stock Spindle/Quill Dia: 50 mm and above - Spindle Travel/Quill Traver: 140 mm and above Speed: <ul style="list-style-type: none"> - No. os spindle speeds: 8 Minimum - RPM/ Range: 80 - 1000 Minimum Feed: <ul style="list-style-type: none"> - Longitudinal Feeds & Range: 24/0.045 - 0.63 mm/rev - Transverse feeds and Range: 24/0.015 - 0.21mm/rev Threads: <ul style="list-style-type: none"> - Metric : Minimum 20, 0.5 - 7 mm - Inch: Minimum 24, 56-4 TPI Electrical : <ul style="list-style-type: none"> - Motor capacity: Minimum 5.5 KW - Power Supply: Three Phase, 415 - 440 V, 50 Hz 	<ul style="list-style-type: none"> - Lighting arrangement - Auto Feed System - High quality metal undercounter anodized or Powder coated - Bed made of 25 grade Cast iron with hardness of 400 BHN. - Headstock fitted with induction hardened and grounded spindle made from alloy steel. - Apron is totally enclosed with oil bath system with lever type arrangement for automatic feeds. - Emergency brake system - Tail stock hardened and ground, tail stock spindle made from alloy steel. 	<ul style="list-style-type: none"> - Three -jaw self-centering chuck 150 mm min fixed steady - Four -jaw independent chuck 250 mm min - Face Plate, Driving Plate - 1-way tool post - Draw in type collets set up to 25 mm,0.5 mm - Relieving attachments - Quick change gear box for Metric or British threads - Live and dead centers fixed and revolving type - Taper turning attachment - Dog carriers - Steady 	- Standard	<ul style="list-style-type: none"> - User/Operating Manual - Warranty Certificate 	<ul style="list-style-type: none"> - To be supplied and installed at designated ITI's in Himachal Pradesh - Training as required by staff of ITI 	<ul style="list-style-type: none"> - Two years from Date of Installation

			<ul style="list-style-type: none"> - One piece complete stand. - Induction hardened bed way - Metallic covers and telescopic covers for guideways protection. - Servo gear system - Quick change gear mechanism - Over load protection system in Motors - A Generous Coolant Supply should be Provided with an Electric Coolant Pump Fitted on a Tank Through a Piping and a Nozzle 	<ul style="list-style-type: none"> rest, Follow rest - Gear cutting attachment. - Square Quick changing tool post - Multi position Quick changing tool post - Mandrals, Cat heads, Chuck key, Tool post key, Spiders, Drill chuck with sleeve and socket, Tool Holders, Cutting off Tool holders, Boring bars and holders, Tool Post grinders, Thread chasing dial Cutting Tools: - HSS Single Point cutting tools - HSS Knurling tool, Threading tools - Right hand and left hand 				
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				Turning tools, Diamond Point cutting tool, Parting off tool, Tool holder with set/Range of ceramic inserts of different shapes and sizes for turning, facing, Forming tools, Cutting tool shanks, Set of taper mandrals /arbors, Taper pins				
62.	Grinding machine pedestal type D.E. 200 mm dia. Wheel with wheel guard and vision, Motor Capacity - 0.75 KW	Grinding machine pedestal type Double Ended: <ul style="list-style-type: none"> - Minimum Grinding Wheel Diameter - 200 mm - No Load Speed minimum : 3000 RPM - Motor Power Minimum -0.75 KW -Two wheels rough and smooth - Adjustable spark detectors for safety - Adjustable shatter-proof eye shields - Thick wheel guards with built in dust chutes 	<ul style="list-style-type: none"> - Sealed and pre-lubrication Ball Bearings, - Balance Motor for smooth operation 	- Standard	- Suitable one set of rough & smooth grinding wheels	<ul style="list-style-type: none"> - User/ operating manual - Installation, Maintenance and Spare part manual. - Warranty certificate 	To be installed at designated ITI's in Himachal Pradesh <ul style="list-style-type: none"> - Training as required by staff of ITI 	One Year
63.	Drill machine pillar type-motorized	Pillar Drilling Machine : <ul style="list-style-type: none"> - Drilling Capacity :12 mm Max - Chuck Capacity :1.5-12 mm - Spindle Taper : Minimum MT-3 - Spindle Traverse : Minimum100mm - Distance between Spindle and Table : 	<ul style="list-style-type: none"> - A Sturdy & heavy body made up of cast steel & heaving a solid pillar ,hardened & 	<ul style="list-style-type: none"> - Standard accessories - All the tools & keys required to operate the 	- Standard	<ul style="list-style-type: none"> - User/Operati ng Manual - List of Service Centres in 	- To be supplied and at designated ITI's in Himachal	One Year

		Minimum 300mm - Distance between Spindle and Base : Minimum 500MM - Table Working Surface Area : Minimum 200 x 200mm - Number of Spindle Speeds : Minimum 8 - Pillar Diameter : Minimum 57mm - Range of Spindle Speed :between 115 – 2060 rpm - Coolant System with Coolant Pump with tank - Main Motor : Minimum 0.75 KW - Operating Voltage: 440V, 3 Phase.	chrome plated with a heavy base enough to withstand impact & load	machine with attachments - Suitable Coolant Pump with tank.		India - Warranty Certificates	Pradesh - Training as required by staff of ITI	
64.	Power saw machine - hydraulic feed system 400 mm. Blade size, Motor Capacity -0.75 KW	Power saw machine - hydraulic feed system : - Cutting Capacity (Round) : Min. Upto 200mm - Cutting Capacity(Square): Min. Upto 150 mm - Length of Stroke: Minimum 140 mm - Stroke Per Minute : 80-125 - Blade Size : 400 mm - Motor Capacity : Minimum 0.75 kw, 415 V, 3 Ph, 50 Hz - Power of coolant motor : Minimum 0.09 kW	- Hydraulic movement of cutting arm - The arm should lifts out of contact of the work piece in the forward stroke to prevent damage to the blade or work piece - Three speed cutting feed controlled by a lever allows to adjust speed according to the material. - Motorized Coolant System	- Adjustable Bar Rest, - V-jaws for Bundle Clamping - Coolant System - Adjustable Material Stop - Machine Lamp	- Standard	- User/Operating Manual - List of Service Centres in India - Warranty Certificates	- To be installed at designated ITI's in Himachal Pradesh - Training as required by staff of ITI	One year
65.	Digimatic Electronic Vernier Caliper	Digimatic Electronic Vernier Caliper: - Measuring Range : 0 - 200mm - Resolution :0.001mm - Accuracy : 0.001mm - Display : LCD/LED - Rugged blow moulded hard case - Suitable Battery for Operation	The Caliper provided With : - Thumb Roller - The ZERO/ABS key for the display to be Zero-Set at any slider	- Spare Battery	- Standard	- Calibration certificate - User/Operating Manual - Warranty Certificates	- To be installed at designated ITI's in Himachal Pradesh - Training as required	One year

			position along the scale for incremental comparison measurements. - Switch allow return to the absolute (ABS) coordinate and display of the true position from the origin point -jaws-closed point. - Large and clear LCD/LED readout				by staff of ITI	
66.	Digimatic electronic outside Micrometer 25 to 50 mm, LC 0.001 mm.	Digimatic electronic outside Micrometer : - Measuring Range : 25-50 mm - Resolution : 0.001mm - Accuracy : 0.001mm - Display : LCD - Rugged blow moulded hard case - Suitable Battery for Operation	- Thimble and sleeve Carbide tipped Micro-lap finish. - With ratchet stop	- Spare Battery	- Standard	- Calibration certificate - User/Operating Manual - Warranty Certificates	- To be installed at designated ITI's in Himachal Pradesh - Training as required by staff of ITI	One year
67.	Plumbers Ladle	Plumbers Ladle: - 3" tp 4 " Bowl Diameter - 14" to 16" Integrated Metal Handle - Pour spout on both sides	- Able to withstand extreme temperatures - High resistance to both corrosion and abrasion -Long handle for pouring and melting lead.	- Standard	- Standard	- Standard	- To be delivered at the designated Industrial Training Institute in Himachal Pradesh	One year

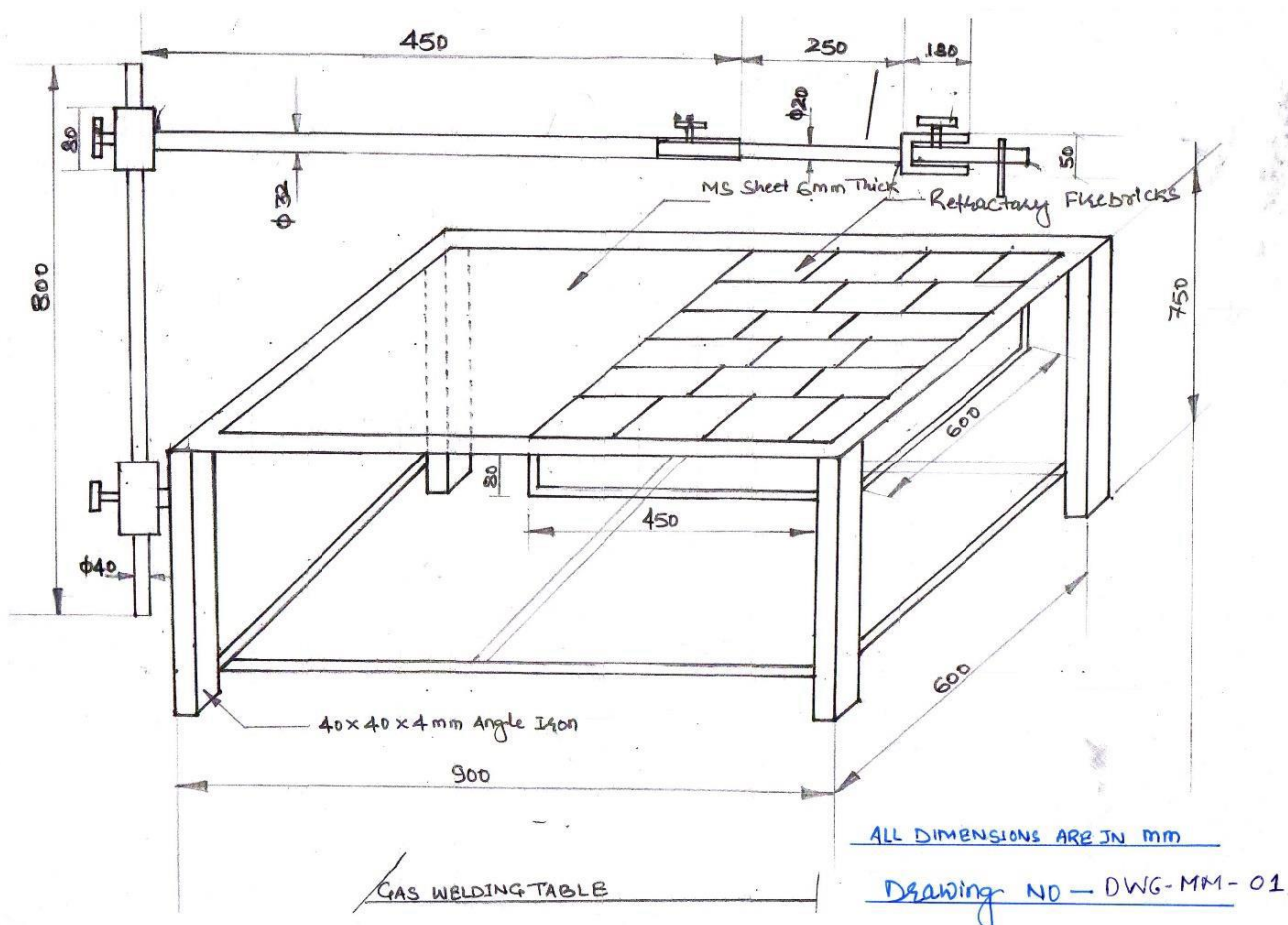
68.	Manually operated Pipe Bender.	Manually operated Pipe Bender: - Type : Manual - Size : 12 to 30 mm - Capacity of Pipe Bending Thickness : 2.5-6 mm	- Rugged Construction - Easy to Operate	- Standard	- Standard	- User/operating manual - Warranty certificate	- To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI	One year
69.	Portable forge ,450mm with hand blower.	Portable forge 450mm with hand blower : - Size : 450 MM - Height : Minimum 750 MM - Blower Type – centrifugal blower Hand Operated	- safety cover made of thick sheet duly painted - Able to withstand extreme temperatures - High resistance to both corrosion and abrasion	- Standard	- Standard	- User/operating manual - Warranty certificate	- To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI	- Standard
70.	Water closet (Indian type) complete with over head cistern	Water closet (Indian type) complete with over head cistern - Closet Material : Ceramic - Minimum Size : 500x380x250 mm Cistern : - Capacity : Minimum 10 Ltrs - Cistern Material : PVC - Complete fittings of Cistern(Float Valve and Connection Hoses) - Suitable angles & bolts for fixing	- Colour : White/Ivory	- Standard	- Standard	- Standard	- To be supplied at designated ITI's in Himachal Pradesh	- Standard
71.	Urinal wall mounting type complete with Auto Urinal Sensor Flusher	Urinal wall type with Division Plate with Auto Urinal Sensor Flusher : - Urinal Size : Minimum 400X390x600mm - Type : Flat Back - Division Plate Size : Minimum 80X300X700 mm - Colour : White/Ivory - Material : Ceramic Urinal Sensor Flusher : - Sensing range: 200- 600mm adjustable	- Standard	- Standard	- Standard	- Standard	- To be supplied at designated ITI's in Himachal Pradesh	- Standard

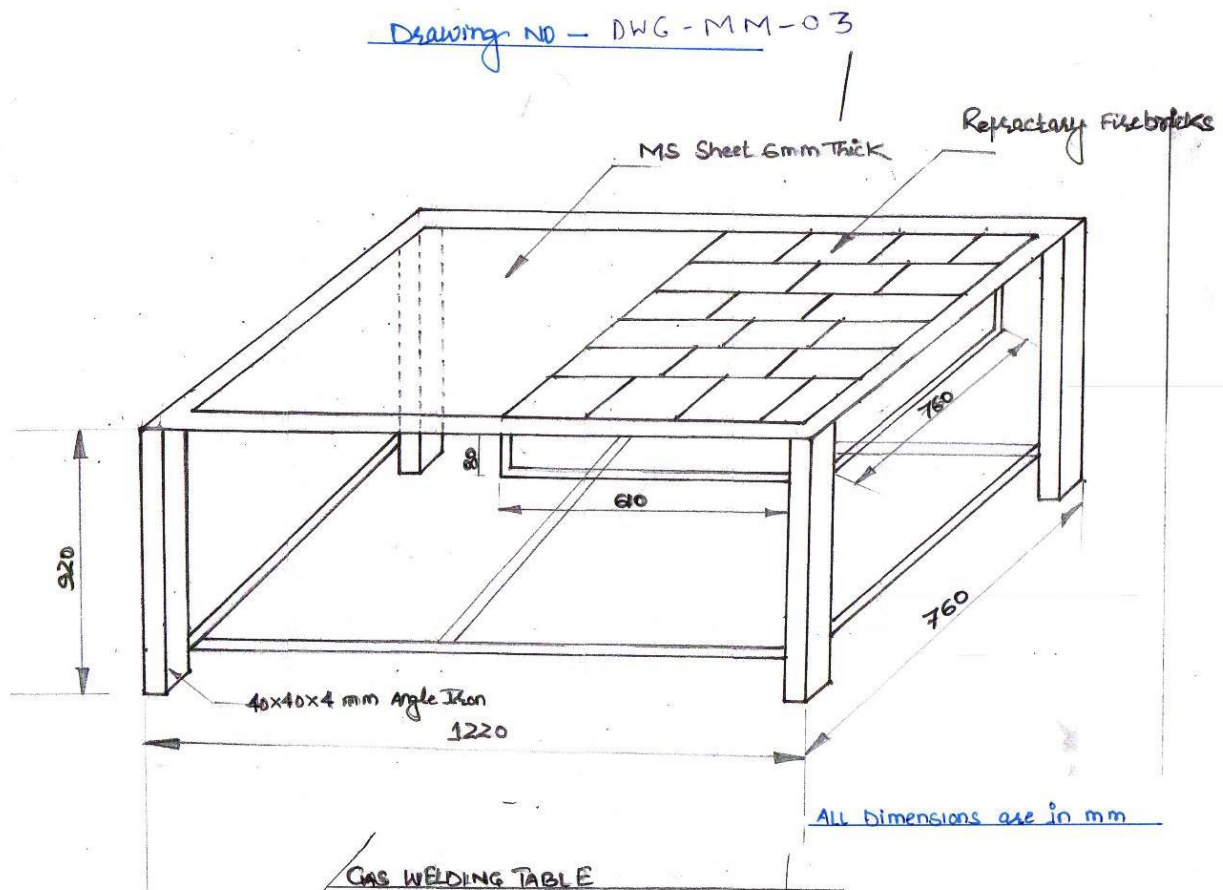
		<ul style="list-style-type: none"> - Flush Volume : 1 to 4 L - Water Pressure: 01 to 0.7 MPa - Inlet Outlet orifice : 15 mm - Suitable angles & bolts for fixing - Fitted with CP Waste of suitable size 						
72.	Water meter	Water Meter: <ul style="list-style-type: none"> - Range: 0-400 ltr/min - Material : Brass - Dial Type : Analog - Size : 1/2" to 1 " - Operating Pressure : 5 to 10 bar 	-Standard	-Standard	-Standard	<ul style="list-style-type: none"> - User/Operating Manual - Warranty Certificates 	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh 	one year
73.	Double Ended pedestal Grinding machine with 175mm wheel.	Pedestal Grinder, Double Ended: <ul style="list-style-type: none"> -Two wheels one rough and one smooth - Grinding Wheel Diameter: 175 mm each - No load Speed: Minimum 1500 RPM - Motor Capacity: Minimum 0.5 HP 	<ul style="list-style-type: none"> - Sealed and pre-lubrication Ball Bearings, - Balance Motor for smooth operation - Adjustable spark detectors for safety - Adjustable shatter-proof eye shields - Thick wheel guards with built in dust chutes 	- Standard	<ul style="list-style-type: none"> - Suitable one set of rough & smooth grinding wheels 	<ul style="list-style-type: none"> - User/Operating Manual - List of Service Centres in India - Warranty Certificate 	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI 	One Year
74.	Hydraulic pressure machine for testing leakage in GI pipe fittings	Machine for testing leakage in GI pipe fittings (1/2" to 2") <ul style="list-style-type: none"> - Power : Hydraulic - Working Pressure : 60 Bar 	<ul style="list-style-type: none"> - Should be provided in Rugged blow molded hard case 	-Connecting Hoses,Adaptors and Connectors.	<ul style="list-style-type: none"> - One Set of Spare Seals and O- Rings 	<ul style="list-style-type: none"> - User/Operating Manual - Warranty Certificates 	<ul style="list-style-type: none"> - To be supplied at designated ITI's in Himachal Pradesh - Training as required by staff of ITI 	One year

75.	Sight rail and bonning rod	Sight rail and bonning rod Bonning rod(Set of 3) - T-Shaped - Size : 1000x600x50 mm - Material :Wood (First Class) Sight rail : - consist of horizontal cross piece nailed to a single upright or pair of uprights driven into the ground.	- The upper edge of the cross piece of sight rail should be able to set to convenient height above the required plane of the structure, and above the ground to enable a man to conveniently align his eyes with the upper edge	-Standard	-Standard	-Standard	- To be supplied at designated ITI's in Himachal Pradesh. - Training as required by staff of ITI	One year
76.	Bench type Electric Motorized Drilling Machine of 15 mm capacity	Bench Drilling Machine : - Drilling Capacity: 15 mm - Chuck Capacity 1.5-15 mm - Minimum spindle travel :80 mm - Spindle taper: Solid - Minimum No. of spindle speed : 2 - Range of spindle speed:500-2825 rpm - Electric Motor: Minimum 0.5 H.P, 3 Phase	- A Sturdy metallic body hardened & chrome plated/spray painted with a heavy base enough to withstand impact & load.	- Standard accessories - All the tools & keys required to operate the machine with attachments. - Suitable Starter	-Standard	- User/ operating manual - Warranty certificate	- To be supplied at designated ITI's in Himachal Pradesh. - Training as required by staff of ITI	One year

4. Drawings

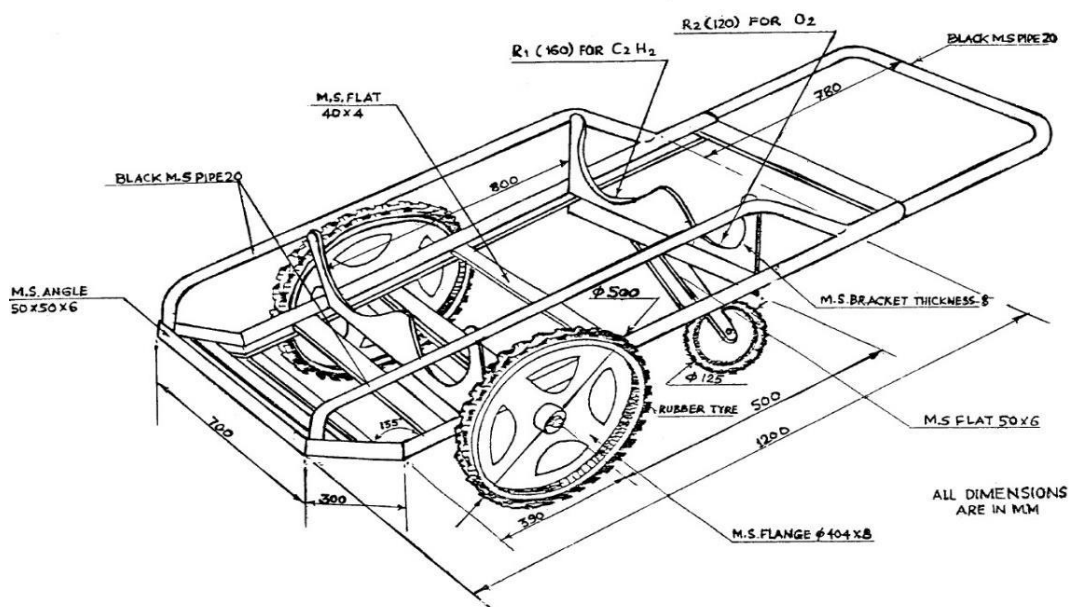
1. Item No. 09: Gas welding table with positioner with Fire Bricks 900 X 600 X 750 mm



2. Item No. 10: Gas Welding Table with fire bricks top and stand

3. Item No. 13: Trolley for Twin gas cylinders.

DRAWING NO : DWG-MM-02



TWIN GAS CYLINDER TROLLEY

ALL DIMENSIONS ARE IN MM

