

## TECHNICAL SPECIFICATION

### 1. Portable Battery Operated & Rechargeable Arc Welding Machine

<b>Technical requirements</b>	
Weldingcurrent electrode	10 -140 A
TIGweldingcurrent	3 – 150 A
Chargingcurrent (normal)	10 Amps
Chargingcurrent (quick)	18 A
Protectionclass	IP23 or better
Opencircuit voltage	90 V
Operatingtemperature	IP 23 or better
Storage temperature	5 to+60°C
Weight	10-15 kgMAX–Includingbattery
Electrode diameter	2.5 &3.15mm
<b>Battery</b>	
Type	Lithium ironphosphate (LiFePo4)rechargeablebattery
Nominal voltage	52.8 V or better
Capacityapprox.	396 WH or better
Operatingtemperature	10 to+50°C
Standardchargingtime	50-60 mins
Rapidcharging	30-40 mins
Weight	3-5kg
<b>Battery Charger</b>	
Input Voltage	<b>230V±15%</b>
MainFrequency	50/60Hz
Output Voltage	30 to 58 V
Input Current (Max.)	10 A
Output Current	18 A DC
Efficiency	95%or more
StandbyPower consumption	2.4 watt Max
Output Power(Max.)	1040 watt
IEC Ingress Protection rating	IP43S
Weight (approx.)	2 Kg
Cooling system	Convection and fans
Mark of conformity	CE
EMC emissions category	A

<b>Indicator in the Welding machine:</b>
Battery capacity(% charge)
Internal error
Reverse polarity indication
Stick welding
Hot Start
Soft Start
Arc force

Note:

- The Welding Machine, Battery Charger & the cables should be manufactured by the same OEM to have Safety, Quality & Performance.
- Optional Tig function should be available
- Bidder (s)/ Tenderer(s) should enclose the catalogue of the quoted product, Test certificate, Operation Manual

## 2. SMAW Welding Machine

Mains Voltage:	Three phase, 3x380-460V
Display on front panel:	Machine should have LED display on front panel for welding current, Dynamic arc force & Soft start-Hot start
Duty cycle :	35% DC 250 A
	100% DC 175A
Mains Connection Cable:	3x2.5 mm <sup>2</sup> , length 3.3 meter.
Fuse, delayed:	16 A
Welding Current Range:	15-250 A
Welding Current Control:	Step less. (Equipped with one knob adjustment)
Open Circuit Voltage(OCV):	88V
Efficiency at 100% Duty cycle:	89%
Cos Phi:	0.98 or better
Degree of Protection:	IP 23
Max. apparent power	7.1 KVA or better
Range of Working Temperature:	-10°C to +40°C

Range of Storage Temperature:	-25°C to +55°C
Norms:	IEC 60974-1
	IEC 60974-10
	EN 50199
Electrode Class to be used on Machine:	Machine is suitable for any class of electrode (BASIC,CELLULOSIC & RUTILE)
Electrode Diameter:	Any size between 1.5mm to 4mm
Recommended earth-leakage circuit breaker	Type B
Output voltage range according to standard characteristic	20.6-30 V DC
Over voltage category	III
Pollution level according to IEC60664	3
EMC device class	A
Weight:	Max: 15 kg ( with connection cable)
Automatic current adjustment facility during welding:	In machine current should automatically adjust (increase ordecrease) if electrode goes nearer to job OR away from job.
Anti-stick function:	Machine should have anti stick function for non-sticking ofelectrode during short circuit of electrode to the job
Electrode holder with cable:	4 meter length properly insulated with Bayonet/Dinse socket toconnect with machine and Electrode holder.
Earth Cable:	3 meter length properly insulated connected with bayonet/Dinssocket to connect with machine and earth clamp.
Thermal Indicator:	Front panel of machine is equipped with overload safetyindicators.
Machine should have Handle to carry the machine to work site.	

### 3. Multi-Purpose & Intelligent GMAW Welding Machine

<b>Technical Specification:</b>	
<p>The scope covers supply &amp; commissioning of Intelligent MIG-MAG Synergic Pulse Linux based IGBT Welding Plant with air cooled torch for welding steel plates of thickness ranging from 2mm to 20mm, having powder coated sheet metal body and consisting of inverter based power source, wire feeder unit, torch gun, Co2/Argon regulator, in-built digital ammeter &amp; voltmeter &amp; interconnecting cables, along with all the standard accessories and items to make the unit fully functional. The machines shall have following broad technical parameters</p>	
<b>Power Source:</b>	
Technology	Intelligent Microprocessor Digitally Controlled Linux based IGBT Inverter (latest generation), Heavy-duty constant potential type power source for MIG/MAG, Synergic MIG, and Synergic Pulse/Pulse Multi Control MIG welding applications
Type of Inverter	IGBT
Current Range	3–400A
Main Voltage	400V/415V ±10%, 3phase, 50 Hz ±3%, 3/4 wire system
Mains Frequency	50 /60 Hz
Welding Current @60% Duty Cycle	360A (10min/40°C (104°F) 60% d.c.)
Welding Current @100% Duty Cycle	320A (10min/40°C (104°F) 100% d.c.)
Type of cooling	Air Cooled
Open Circuit Voltage	65 -80 Volts
Efficiency	88%
Protection Class	Drip proof and confirming to IP23 or better.
Power Factor	0.97 or better
Weight	Less than 45 Kg
<b>Wire Feeder:</b>	
Feed Mechanism	4 -Roll filler wire drive mechanism for the wire feeder. All 4 Feed rolls should be geared and grooved and should be adapted to all wire sizes.
Wire feed range	1.0 to 25m/min
Wire filler diameter	0.8 – 1.6 mm (All diameter roller not to be supply)
Gun connector	Euro
Degree of Protection	IP 23
<b>Welding gun/ Torch:</b>	

Type	Euro
Current rating	360 Amps. at 60% duty cycle with Argon and CO <sub>2</sub> mix Gas at 10 min/40°C.
Length of Torch	3.35 mtrs (Min)
Filler wires	0.8–1.6mm
Cable construction	Integrated type duly armoured.
Interconnection cable assembly of 1.2m comprising of 70mm <sup>2</sup> power cable to carry welding current of 400A fitted with copper cable connectors, gas hose & electrical control cable of 5m each between power source and wire feeder unit. These cables shall be inserted in flexible heat resistance hose/sleeve to avoid damage to cable.	

**The machines should have following features.**

1. Adjustable Arc force, crater current, crater voltage, welding current & voltage
2. 2/4 step welding mode switch
3. Welding current and voltage should be pre-set and displayed digitally
4. The welding machine is constant potential type with touch screen control unit/panel with English & Hindi language GUI interface including burn back control, crater fill, wire feed speed control, gas control with gas saving device, with infinitely variable pulse control synchronization of the wire feed speed with current pulse & in built data logger. Necessary diagnostic software for fault recognition and analysis is pre-loaded in the welding machine
5. The power source is completely digital microprocessor controlled IGBT/MOSFET based inverter of latest generation and has step-less control of current and voltage. The frequency of inversion should not be less than 40kHz. The communication from power source to peripheral devices like wire feed drive, welding gun, remote control unit etc. must take place via communication speed of not less than 100MBPS.
6. The power source is pre-programmed for various thicknesses of jobs/filler wire sizes. It has the facility to store different programs in memory (min 500 program locations) and it is possible to retrieve the programs from the panel.
7. The machine has at least 300 pre-programmed Synergic Curves for MIG/MAG as well as Pulsed MIG processes in the memory and also has at least 10 empty memory slots for adding new or customized programs.
8. Machine should be Robotic Compatible for future use.
9. A step-less regulation will be provided for accurate selection of wire feeders speed (for welding current) and a separate knob for welding voltage control, in normal MIG/MAG operation. The Touch screen Function Panel has step-less regulation of welding power (welding current & welding voltage control simultaneously) in Synergic MIG operation. The function panel also has facility for Arc Length control Stabilizer, Penetration

#### 4. AC/DCGTAW Welding Machine

<b>TECHNICAL SPECIFICATION:</b>	
The AC/DC TIG Welding power source should be Digitally controlled inverter with latest techniques.	
I. Power source Type	Digital Microprocessor Controlled MOSFET inverter Based AC/DC Power Source incorporating Power Factor Control device.
II. Input Supply	415±15% V AC , 50/60Hz, Three Phase
III. Max Input KVA Rating at 100% Duty cycle	(4-6) KVA
IV. Output Current Range (AC/DC)	
TIG	3A – 300A
Setting Range MMA	10A – 300A
V. Welding Current (for both TIG & MMAW mode) at 10 min/40°C:	
At 35% Duty Cycle	300A (at 40 <sup>0</sup> C ambient and 10min. duty cycle.)
At 100% Duty Cycle	180A (at 40 <sup>0</sup> C ambient and 10min. duty cycle.)
VI. Stick Electrode (MMAW)	(1.0 – 4.0) mm
VII. Pulse Frequency, DC	0.4Hz – 100Hz or better
VIII. Pulse Ratio	10 – 70% of base current
IX. Starting Current	0% -200% of welding current
X. End current	0% -100% of welding current (for better crater filling)
XI. Type of TIG Torch Cooling	Air cooled (Forced)
XII. Degree of Protection (OEM Certificate to)	IP 23 or better
XIII. Ignition voltage (Up)	9.5KV
XIV. Insulation class for Transformer	For better
XV. Power Factor	0.98 or better
<b>FEATURE</b>	
1. Construction: Portable, Light Weight, Handy & Sturdy to work at rough & tough shop floor as well as on-board vessel working condition.	
1.1 The machine should have function selection for following processes:	
a.	DCTIG
b.	AC TIG
c.	DC Pulsed TIG
d.	AC Pulsed TIG
e.	TIG Tacking

2. Synergic Pulsed TIG (i.e. in pulse mode if current is set then voltage can be automatically adjusted) in both AC & DC mode
3. The machine should be fully protected against overloading/prevent damage due to operations at higher current range than specified, through built-in tripping device.
4. The welding current and welding voltage should be displayed in the front panel to know actual value of welding current and welding voltage.
5. Reliable joining of aluminum panels with different thicknesses: good penetration in the thicker panel, no melting through the thin panel.
6. Wave modification for noise reduction & Automatic cap shaping of tungsten for Al welding
7. Welding system should be water cooled
8. Machine should be compatible to Plasma welding also by addition of Plasma system with same TIG machine.
9. i) Welding voltage & current
ii) Operating mode
iii) Welding parameter values (like Gas pre-flow and post flow time, down slope and up-slope time, Pulse time, ignition current, main current etc).
iv) Set Values & Real Values of Welding parameters.
v) Main voltage - Overvoltage & Under Voltage indications.
vi) Over temperature indication.
vii) Error display

## 5. Welding Simulator Machine

<b>SIMULATOR PARAMETERS</b>	
INPUT SUPPLY	110 V – 230 V +/- 10%
CURRENT RANGE - SMAW	50A - 240A (3mm & 4MM ELECTRODE)
VOLTAGE & CURRENT RANGE - GMAW	10V - 32V & 25A - 270A (1.2 DIA WIRE)
CURRENT RANGE - GTAW	25A - 270A (2.0mm FILLER ROD)
SCREEN	SIMULATOR MUST HAVE SUFFICIENT LARGE DISPLAY AREA i.e. 20 INCH AND ABOVE WITH TOUCH SCREEN FACILITY FOR EASY CONTROLLING OF MACHINE.
MENU LANGUAGE	HINDI & ENGLISH ARE MANDATORY.
<b>WELDING PRACTICES REQUIRED IN A SIMULATOR</b>	
PROCESS SIMULATED	SMAW, GMAW AND GTAW
JOINT CONFIGURATIONS	BUTT, FILLET, PIPE TO PIPE JOINTS etc.

WELDING POSITION	1G TO 5G POSITIONS
WORKPIECE POSITION	FLEXIBILITY TO POSITION THE WORKPIECE AT ANY PLACE .VIRTUAL WORKPIECE.
TORCH CONTROL - GMAW & GTAW	TWO STEP AND FOUR STEP CONTROLS.
TRACKING SYSTEM	MAGNETIC TRACKING FOR TORCH AND OPTICAL TRACKING FOR VR GLASSES.
<b>SIMULATION FEATURES</b>	
TECHNOLOGY	VIRTUAL REALITY
SIMULATION METHODOLOGY	GREEN LEARNING WITH NO REAL ARC OR REAL FUMES.
RANDOM ACCESS MEMEORY IN GB	8 GB
SIZE OF HARD DISK IN GB	256 GB
PROCESSOR	INTEL I5
OPERATING SYSTEM	WIN 10
WELD BEAD SIMULATION	CONTINUOUS ARC WITH WELD BEAD FORMATION
WELDING PRACTICE	PRACTICE ON WORKPIECE - MINIMUM 5 INCH LONG WELD BEAD.
SMAW WELDING PRACTICE	DURING SMAW WELDING PRACTICE, VIRTUAL ELECTRODE TO BE USED.
GMAW METAL TRANSFER	GMAW WELDING SHOULD ACCOMMODATE SHORT AND LONG STICK OUT OR IT SHOULD HAVE 2 STEP AND 4 STEP STRINGER OPTION.
GTAW WELDING PRACTICE	GTAW WELDING SHOULD HAVE SKILL GUIDANCE FOR WORK AND TRAVEL ANGLE
TYPES OF WORK PIECE	HAPTIC WORK PIECES ( NON METTALIC)
<b>GUIDANCE AND USER COMFORT</b>	
GUIDANCE FOR PARAMETERS	SIMULATOR SHOULD HAVE INDICATION OF CURRENT, VOLTAGE, ETC... THE STUDENT SHOULD BE ABLE TO SEE IF THE PARAMETERS ARE CORRECT OR WRONG. THE SIMULATOR SHOULD HAVE INDICATORS TO GUIDE THE STUDENT.
GUIDANCE FOR SKILLS	SIMULATOR SHOULD GUIDE THE STUDENT ON ALL THE SKILL SETS LIKE: STICK OUT, WELDING SPEED, TORCH OR ELECTRODE ANGLE FOR ALL THE THREE PROCESSES.
WELDER VIEW	WELDER SHOULD BE ABLE TO SEE THE WORKPIECE FROM INSIDE THE HELMET.

REALITY HELMET/HEADBAND	HD SCREEN HELMET SHOULD HAVE HIGH RESOLUTION.
<b>WELDING ANALYSIS AND EVALUATION</b>	
SKILLS ANALYSIS FOR TORCH	GUIDANCE / ANALYSIS FOR ARC LENGTH, WORK ANGLE, SPEED, TRAVEL ANGLE & PATH.
SKILLS ANALYSIS FOR GTAW FILLER	GUIDANCE / ANALYSIS FOR WORK ANGLE AND TRAVEL ANGLE
ON SCREEN EVALUATION	VIDEO PLAYBACK WITH OPTIONS OF VIEWING FROM DIFFERENT ANGLES.
STUDENT ACCESS	ON SIMULATOR SCREEN
TRAINER ACCESS	100% AVAILABILITY OF SIMULATOR FOR STUDENT PRACTICE. THE TRAINER MUST NOT STOP THE SIMULATOR FOR EVALUATION, ANALYSIS, DATA FEEDING ETC.
<b>ACCESS FROM EXTERNAL PC</b>	
FOLLOWING ACTIVITIES TO BE CARRIED OUT FROM AN EXTERNAL PC. THE SIMULATOR TO BE USED ONLY FOR SIMULATION PRACTICES AND NOT TO BE USED FOR DATA INPUT AND FEEDBACK ANALYSIS.	ADD, EDIT & DELETE STUDENT NAMES
	ADD, EDIT & DELETE COURSES
	ADD, EDIT & DELETE MODULES
	UPLOAD OF PDF DOCUMENTS
	EVALUATION OF STUDENT PERFORMANCE
	SUPPLIER TO PROVIDE COMPATIBLE SOFTWARE FOR OFFLINE ACCESS TO THE TRAINER TO CARRY OUT THE ABOVE ACTIVITIES THROUGH EXTERNAL PC
<b>KEY FEATURES FOR SAFETY, QUALITY, VALIDATION, AUTHENTICITY, UPGRADATION</b>	
SAFETY REGULATIONS	SIMULATOR SHOULD BE APPROVED/ CERTIFIED BY ANY GOVERNMENT AGENCY/ CE / FCC REGULATIONS - CERTIFICATE TO BE ENCLOSED
WELDING SOFTWARE	ALL SOFTWARE MUST BE SUPPLIED WITH LIFE TIME LICENCE INCLUDING MAIN OS SUCH AS WINDOWS.
DATA SECURITY	RFID BASED CARD ACCESS SYSTEM MUST BE INBUILT FOR ENHANCED DATA SECURITY AND ADMINISTRATION OF THE MACHINE.
UPGRADATION	MACHINE CAN BE UPGRADABLE FOR ROBOTIC ARM SIMULATION FACILITY FOR GMAW WELDING, 3D VIEW FROM THE HELMET.
MACHINE DISPLAY	MACHINE DISPLAY MUST BE ABLE TO PLAY VARIOUS

	AUDIO VISUALS WHEN MACHINE IS NOT IN USE.
<b>SCOPE OF SUPPLY</b>	
WELDING SIMULATOR	1 NO
REALITY HELMET/HEADBAND	1 NO
SMAW TORCH	1 NO
GMAW TORCH	1 NO
GTAW TORCH	1 NO
GTAW FILLER	1 NO
BUTT JOINT WORKPIECE	1 NO
FILLET JOINT WORKPIECE	1 NO
PIPE BUTT WORKPIECE	1 NO
SOFTWARE DVD OR CD OR USB	1 NO

## 6. GAS BRAZING SETUP

ABSOLUTE SAFETY

HIGH RESISTANCE TO BACK FIRES

BALANCED WEIGHT

COMFORTABLE WORKING FOR CONTINUOUS OPERATION

TORCH WEIGHT 1050 GMS., LENGTH 510MM

ACCURATE

PRECISE FLOW RATES

HEAVY DUTY APPLICATIONS EVEN AT LOW CYLINDER PRESSURES

CUTTING RANGE : 3 - 300MM

TOUGH

90 SOLID FORGED BRASS HEAD

DURABLE

RUGGED DESIGN ENSURES MAXIMUM STRENGTH

EXCELLENT CUTTING QUALITY

REDUCED POST CUT GRINDING OPERATION

7. TEACH WARE SET

SL NO.	TECHNICAL SPECIFICATION :- TEACH WARE SET FOR DISPLAY & TRAINING PURPOSE FOR THE WELDERS	
1	PRESENTATION	ALL TECH-WARE SET SHOULD COME ALONG WITH A ALUMINUM CARRYING CASE
2	SCOPE OF SUPPLY	WELDING TORCH SAMPLES, WELDING ELECTRODE SAMPLES, CD-ROM, ELECTRODE  HOLDER, CONTACT TIP, GAS LENS PACKED IN AN ALUMINUM SUITCASE TO LOCK UP
3	CROSS-SECTION VIEW	VISUALIZING OF MIG , TIG TORCH SHOULD BE CONSTRUCTED AS  CROSS SECTION OF THE TORCHES.

## 8. AUTO DARKENING HELMET

### Technical Specification

Shade levels	inactive: Shade level 4 active: Shade level 9-13
Power supply	Solar cells, 2 pcs batteries 3V exchangeable (CR2032)
Operating time batteries	Approx. 3,000 hours (operating)
Sensors	3 sensors
Sensitivity	Continuously adjustable, new with "Super High" sensitivity
Switching time	light to dark: 0.100 ms at room temperature, 0.100 ms at 55°C dark to light: 0.05 s - 1.0 s
Classification EN379	Optical class: 1 Scattered light: 1 Homogeneity: 1 Angular dependence: 2
Field of view	50 x 100 mm 90 x 110 x 9.5 mm
Shape stability	Welding mask: up to 220°C / 428°F Front cover lens: up to 137°C / 266°F
Eye protection	Ultraviolet / Infrared Protection: maximum protection at any shade level
Operating temperature	-10°C to + 70°C / 14°F to 158°F
Storage temperature	-20°C to + 70°C / -4°F to 176°F
Weight	495 g / 17.4 oz
Scope of delivery	Welding helmet, instruction manual, batteries
Warranty	2 years (except batteries)

## **9.. TECHNICAL SPECIFICATIONS OF WELDING GLOVES /JACKETS**

THE NEW WELDING GLOVES ARE MADE OF HEAT-RESISTANCE LEATHER AND OFFER THE IDEAL PROTECTION FOR WELDERS. THE “HIGH-END” MODEL IS EQUIPPED WITH AN INSULATED AND NON-PILLING MOLLETON LINER AND OFFERS RELIABLE PROTECTION EVEN AT EXTREME TEMPERATURES.

### **“HIGH-END” WELDING GLOVE FEATURES**

- - HEAT-RESISTANT CRACKED LEATHER
  
- - LONG ARMS TO PROTECT FOREARMS AS WELL
  
- - HEAT-RESISTANT KEVLAR SEAMS
  
- - NON-PILLING, INSULATED INNER LINING

### **AREAS OF APPLICATION**

- - MIG/MAG GAS-SHIELD WELDING
  
- - ROD WELDING
  
- - ACETYLENE WELDING AND OXYGEN CUTTING
  
- FLAME DESCALING

## **10. WELDING BOOTH**

- 8 FT X 8 FT
- ALUMINUM FRAME
- BOARDS

- FRONT SIDE COVERED WITH WELDING CURTAINS

#### **11. WELDING TABLE 1500 X 750 MM**

- WELDING GRATE
- COOPER PLATE
- CLINKER RAWER
- WELDING SAMPLE DRAWER
- WIRE QUIVER
- WORKHOLDING DEVICE
- ELECTRIC DISTRIBUTION (X 3)
- DIMENSIONS I X W X H
- 1500 X 800 X 945 MM

#### **12. GAS CUTTING TABLE WITH FIRE BRICKS**

- WELDING GRATE
- COOPER PLATE
- CLINKER RAWER
- WELDING SAMPLE DRAWER
- WIRE QUIVER
- WORKHOLDING DEVICE
- ELECTRIC DISTRIBUTION (X 3)
- DIMENSIONS I X W X H
- 1500 X 800 X 945 MM

#### **13. GAS CYLINDER-**

-CO2

-ARGON

-OXYGEN

-DA

#### **14. WELDING MACHINE TROLLEY**

- TROLLEYS WITH WHEELS TO ACCOMMODATE 2 CYLINDERS PER TROLLEY
- DIMENSIONS - 1.2 \* 0.6METER
- TILT TYPE 3 WHEEL TROLLEY
- PARTITION BETWEEN THE CYLINDERS

### 15. ELECTRODE OVEN PORTABLE

SPECIAL FEATURES:

- DIGITAL DISPLAY
- ELECTRODE CAPACITY: 5 KG
- WATTAGE: 65W
- MAX. TEMP. 150°C

SR.NO.	PARAMETERS	MEO-5DD
1	ELECTRODE CAPACITY	5KG
2	MAX. ELECTRODE SIZE	457MM
3	WORKING VOLTAGE	220 VOLTS
4	WATTAGE	65 WATTS
5	SUPPLY CABLE SIZE	18AWGX3C
6	TEMP. RANGE	MAX. 150°C
7	THERMOSTAT	DIGITAL TEMPERATURE
8	THERMOMETER	CONTROLLER
9	HEATING ELEMENT TYPE	MICA BAND TYPE
10	INSULATION	25MM CERAMIC WOOL
11	OUTER SIZE (MM)	545 X 120 X 113
12	INNER CHAMBER (MM)	495MM, DIAMETER 76 MM
13	INNER BASKET	YES
14	BODY	PRE-GALVANIZED STEEL SHEET, POWDER COATED
15	BASKET HOOKS	YES
16	TILT STAND FEATURE	YES
17	LIGHT INDICATOR	YES
18	SHOES	YES

19	SHAPE	SQUARE
20	HANDLE	FIX HANDLE
21	WHEEL	NONE
22	NET WEIGHT	4.16 KG

## 16. GAS REGULATORS

CYLINDER REGULATOR WITH INLET & OUTLET PRESSURE GAUGE, GAS TYPE: OXYGEN

INLET PRESSURE 230BAR/ 3335PSI, OUTLET PRESSURE 10BAR/ 145PSI

CONNECTION TYPE: BSP, FITS DIRECTLY ON STANDARD CYLINDERS.

S.S.SINTERED CENTRAL MICRO FILTER

- NO CONTAMINATION OF VALVE SEAT
- NO GAS LEAKAGES.

MAINTENANCE FREE

- THICK NBR DIAPHRAGM
- SUPPORTED BY LARGE BACKUP PLATE

ACCURATE CONTROL

- MINIMUM PRESSURE FLUCTUATION
  - HIGH FLOW RATES EVEN AT LOW CYLINDER PRESSURES
- HIGH OPERATOR SAFETY

- PRESSURE RELIEF VALVE
- STRONG, DURABLE & SAFE

- FORGED BRASS BODY & HOUSING CAP
  - FIRE-RETARDANT VALVE SEAT MATERIAL
- SINTERED INLET FILTER

- PREVENTS DUST AND CONTAMINANTS FROM ENTERING THE REGULATOR

## LIST OF COMSUMABLES

MIG WELDING WIRE 1.2 MM - 3 SPOOLS
TUNGSTEN ELECTRODE 2.4 MM & 3.2 MM - 10 PCS EACH
FILLER WIRE 2.00 MM OF SS 304 AND 3.00 MM OF AL , 10 KGS EACH
SMAW ELECTRODES - 5 PACKETS OF 3.15 MM
GAS HOSES RED AND BLUE WITH CLAMPS AND NIPPLES- 10 MTRS EACH
RAW MATERIAL FOR WELDING - SS 3 MM THICK PLATES SIZE 75MM X 300 MM - 25 PCS , MS PLATES 6 MM THICK SIZE 75 MMM X 300 MM - 50 PCS , AL 4 MM THICK PLATES SIZE 75 MM X 300 MM - 20PCS
FOR PLASMA CUTTING MS 8 MM THICK SIZE 1 FT X 2 FT - 2 PCS
FOR GAS WELDING - MS 3 MM THICKNESS SIZE 75 MM X 300 MM - 10 PCS
PNEMATIC PIPE WITH NIPPLES AND CLAMPS - 5 MTRS

PART NO	ITEM	QTY
42.0100.1429	INS. RING $\varnothing 20.5/\varnothing 12.15 \times 8$ MM	1
42.0001.3975	NOZZ.STOCK M8X1.5/SW11X44.5 CU	1
42.0100.0575	SPATTER GUARD $\varnothing 11,2/\varnothing 20,3 \times 22$	1
42.0001.4045	GAS NOZZLE $\varnothing 15/\varnothing 25 \times 75$ CT	1
42.0001.6467.10	CONTACT TIP 1,2/M8X1,5/ $\varnothing 10 \times 32$	1 PACKET-(10 NOS)
40.0002.0042.005	STEEL LINER EXPOSED 1.2/5M	3
44.0350.3318	CLAMPING PIECE 1.2	

42.0300.0821	GAS NOZZLE (CERAMIC NOZZLE)	10
44.0350.0336	NOZZLE HOLDER (LONG CAP)	3
44.0350.1460	GAS DIFFUSER/INSULATOR (NUT)	3
42.0001.1150	TIP HOLDER (SLEEVE)	3