

## SPOT WELDING MACHINE



### SPOT WELDING MACHINE APPLICATIONS

- ✳ Automotive Industry
- ✳ Defense Industry
- ✳ Fabrication Industry
- ✳ Switchgear Industry
- ✳ Steel Furniture Industry
- ✳ Home appliances Industry

### SPOT WELDING MACHINE FEATURES

- ✳ Modern Design and Compact Rigid Frame Structure
- ✳ Consistent Welding Quality
- ✳ Independent of Voltage Fluctuation
- ✳ Easy and Safe operation
- ✳ Low Impedance Transformer ( AC; MFAC and MFDC )
- ✳ Microprocessor based Welding Controller Kirpekar-make

### SPOT WELDING MACHINE ADVANTAGES

- ✳ **Frictionless motion of RAM**
- ✳ **Phosphor Bronze Bushes**
- ✳ **Pneumatic Element** : from reputed and quality manufacturers
- ✳ **Low Impedance** The large output at low input can be obtained by the transformer of low impedance design reasonable secondary circuit configuration & high quality conductive material
- ✳ **Long Life electrode holders** : Stainless steel ring is press fitted at the mouth of the holder to hold the electrode. With this the expansion of taper hole of the tip insertion section can be prevented and thus the holder life is remarkable improved
- ✳ **Welding Controller** : Easy to operated and Compact size.
- ✳ **Modular Construction** of the welding heads: this facilities design of machines for automation and high rate of production



**We also offer Projection Welding Machine with the following advantage:**

**1.High Precision**

**2.Easy Adjustment**

Options :

- (1) Two operations in one machine, operating with a transformer and a controller with two heads in the same machine
- (2) 'T' Slot tables to mount fixtures for welding
- (3) Normally machines are supplied with AC Transformer for connection with 2 phase of supply. We can supply Mid Frequency ( 1000 Hz) transformer for connection three phase with suitable controller

Thickness Model	1.0	2.0	3.0	4.0
KSLP25 A/B				
KSLP 50 A/B				
KSLP 75 A/B				

Note: This is a capacity guide in consideration of “B” class mild steel sheets

**SPOT WELDING STANDARD SPECIFICATION**

Model	KSLP-25/35	KSLP-50	KSLP-75/100
TRANSFORMER			
Capacity at 50 % Duty Cycle	25/35 KVA	50 KVA	75/100 KVA
Rated Input Voltage	415 V	415 V	415 V
Max. Short Circuit Current in KA	12	16	20
WELD HEAD			
Weld Head Model	Round RAM	Round RAM	Round RAM
Cylinder dia X Stroke in mm	100x100	125x100	150x100
Max. Weld Force at 6 bar in kgf	470	470	1000
Number of Pneumatic Weld Head	01	01	01
Throat Depth in mm	400 - 600	400 - 600	400 - 600
Throat Gap in mm	200	200	200
Electrode Tip Dimension Dia in mm	16	19	19
Electrode Taper	MT2	MT2	MT2
Electrode Tip Holder Dimension Dia in mm	25	35	35
Holder Length in mm	250	250	250
Holder Arm Dia in mm	60	60	70
Cooling Water Volume in l/mm	15	20	20
Machine Size in mm W X D X H* (Approx)	490 X 1390 X 1750	490 X 1390 X 175	490 X 1390 X 1750
Machine Working Height in mm (Approx)	900-1000	900-1000	900-1000

\*Machine Size W X D X H -Width X Depth X Height , \*D- Dual Head

**Spot Welding Machine also available**

- AC
- 3 Phase DC
- MFDC (Medium Frequency Direct Current)

**Facility Data for Pedestal Spot Welding Machine**

	Nominal Power	Welding Power			Control Power		Compressed Air				Cooling Water (See note (3))					Earth Cable
		Voltage			Voltage	Connect- ing Cable	Pressure	Air Volume (See Note (2))	Charging Hose Inner Dia.	Compr- essor Capacity	Pressure	Inlet Temp.	Flow Volume	Hose Inner Diameter		
														Water Feed	Water Exhaust	
	KVA	V	A	mm <sup>2</sup>	V	mm <sup>2</sup>		L/mm	mm	KW	Kgf/cm <sup>2</sup>	°C	L/mm	mm	mm	mm <sup>2</sup>
KSLP 25 A 25 B	25	415	100	22	220	1.25	5 ~ 7	110	9.5	1.5	1 ~ 3	Less than 30 <sup>0</sup>	15	9.5	12.7	14
KSLP 35 A 35 B	35	415	150	38	220	1.25	5 ~ 7	110	9.5	1.5	1 ~ 3	Less than 30 <sup>0</sup>	15	9.5	12.7	14
KSLP 50 A 50 B	50	415	200	60	220	1.25	5 ~ 7	120	9.5	1.5	1 ~ 3	Less than 30 <sup>0</sup>	20	12.7	19	14
KSLP 75 A 75 B	75	415	300	80	220	1.25	5 ~ 7	120	9.5	1.5	1 ~ 3	Less than 30 <sup>0</sup>	20	12.7	19	14

**Notes:**

- 1) Connection cable has the min. section indicated, heat wise. The cable size may be enlarged according to wiring method and distance.
- 2) Compressed air volume indicates the atmospheric volume with 20mm electrode stroke, welding speed of 30s.p.m. and 5 kgf/cm<sup>2</sup> air pressure
- 3) The Compressor capacity is fixed by this volume.
- 4) Industrial water with electric resistance over 500  $\Omega$ cm is used.

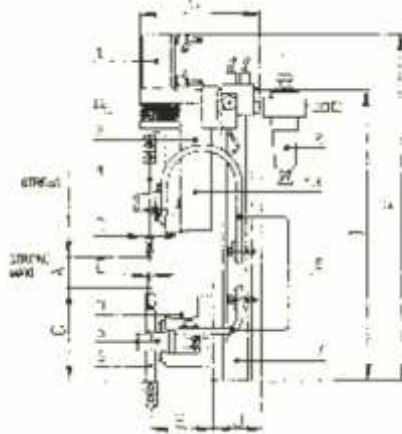
# TABLE MOUNTED WELDING MACHINE

## TABLE MOUNTED SPOT WELDING MACHINE ADVANTAGES

- ★ Due to modular construction of welding heads it is easy to design machines for automation, automatic feeding of components, high rate of production

## SPOT WELDING HEADS FOR RESISTANCE WELDING AUTOMATION

- ★ Adjustment of pressure by regulator
- ★ Linear Motion guides for welding slide
- ★ Upper Electrode holder adjustable X-Y
- ★ Lower electrode Holder adjustable X-Y
- ★ Electrode holder device easily interchangeable for the adaption of tools ,fixing of tools out of the machine is possible
- ★ Moving column on standard aluminum profile
- ★ Copper flex for secondary circuit ( Optional)
- ★ Guide slot for tool fixing
- ★ Double head installation possible



## Welding Heads Details

Type	Force (kgf)	A (mm)	B (mm)	C+10 (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)	K (mm)
TB 18	18	20	70	125	12	3	400	124	40	335	40	71
TC 45	45	50	100	155	16	8	582	195	60	480	80	120
TC-70	70	50	100	155	16	8	582	195	60	480	80	120
TD 110	110	50	125	165	25	12	642	228	80	540	80	165
TD 175	175	50	125	165	25	12	642	228	80	540	80	165
TE 460	460	75	175	205	35	18	855	373	130	720	160	235

## TABLE MOUNTED SPOT WELDING STANDARD SPECIFICATION

Model	KSLT-15	KSLT-25	KSLT-15 D*	KSLT-25 D*
TRANSFORMER				
Capacity at 50 % Duty Cycle	15 KVA	25 KVA	15 KVA	25 KVA
Rated Input Voltage	415 V	415 V	415 V	415 V
Max. Short Circuit Current in KA	8	10	8	10
WELD HEAD				
Weld Head Model	TC-70	TD-110	TC-70	TD-110
Cylinder dia X Stroke in mm	40 X 50	50 X 50	40 X 50	50 X 50
Max. Weld Force at 6 bar in kgf	70	110	70	110
Number of Pneumatic Weld Head	01	01	02	02
Throat Depath in mm	245	245	125	125
Throat Gap in mm	50	50	70	70
Electrode Tip Dimension Dia in mm	8	12	12	12
Electrode Taper	MT2	MT2	MT2	MT2
Electrode Tip Holder Dimension Dia in mm	16	25	25	25
Holder Length in mm	180	180	180	180
Cooling Water Volume in l/mm	15	15	20	20
Machine Size in mm W X D X H* ( Approx)	600 X1005X1330	600 X1005X1330	1800 X 550 X 1460	1800 X 550 X 1460
Machine Working Height in mm (Approx)	950	950	950	950

\*Machine Size W X D X H -Width X Depth X Height , \*D- Dual Head

## Facility Data for Table Mounted Spot Welding Machine

Specification Model	Nominal Power	Welding Power			Control Power		Compressed Air				Cooling Water (See note (3))					Earth Cable
		Voltage	Fuse Capacity	Connecting Cable See Note 1	Voltage	Connecting Cable	Pressure	Air Volume (See Note (2))	Charging Hose Inner Dia.	Compressor Capacity	Pressure	Inlet Temp.	Flow Volume	Hose Inner Diameter		
														Water Feed	Water Exhaust	
	KVA	V	A	mm <sup>2</sup>	V	mm <sup>2</sup>	Kgf/cm <sup>2</sup>	L/mm	mm	KW	Kgf/cm <sup>2</sup>	°C	L/mm	mm	mm	mm <sup>2</sup>
KSLT 15	15	415	60	14	220	1.25	5 ~ 7	75	9.5	1.5	1 ~ 3	Less than 30 <sup>0</sup>	15	9.5	12.7	14
KSLT 25	25	415	100	22	220	1.25	5 ~ 7	110	9.5	1.5	1 ~ 3	Less than 30 <sup>0</sup>	15	9.5	12.7	14

### Notes:

- 1) Connection cable has the min. section indicated, heat wise. The cable size may be enlarged according to wiring method and distance.
- 2) Compressed air volume indicates the atmospheric volume with 20mm electrode stroke, welding speed of 30s.p.m. and 5 kgf/cm<sup>2</sup> air pressure
- 3) The Compressor capacity is fixed by this volume.
- 4) Industrial water with electric resistance over 500 Ω-cm is used.

## SPECIFICATION

<b>Model Name</b>	KE-2B	
<b>Welding Power Supply Voltage</b>	220/415 V AC 50 Hz	
<b>Control Power Supply Voltage</b>	24 V AC 50 Hz	
<b>Control Method</b>	Primary Current Feedback	
<b>Timer Setting</b>	SCHEDULES	15
	PRE-SQUEEZE	00-99 Cycles
	SQUEEZE	00-99 Cycles
	Weld Cycles (I,II,III)	00-99 Cycles
	COOL Cycles (I,II)	00-99 Cycles
	HOLD Cycles	00-99 Cycles
	OFF	00-99 Cycles
<b>Current Setting Range</b>	00-99% or 00-50KA	
<b>Valve Voltage</b>	24 V DC	
<b>Counter Range</b>	0000-9999	
<b>Dimension ( in mm)</b>	120 (W) X 220 (H) X 90 (D)	
<b>Weight ( In Kg)</b>	3 Kg	



### Features of KEPL Controller:

- Versatile
- User Friendly
- Microprocessor based control unit
- Quick feedback system

### Advantages :

- (i) Secondary Feedback Constant Current Control.
- (ii) Upto 15 schedules can be stored in its memory for instant recall.
- (iii) Built in weld monitor : Allows viewing of all programs, parameters etc.
- (iv) Production Counter and job counter.
- (v) Program Lock Facility
- (vi) Inbuilt system for water & air pressure error signals

### OPTIONAL ACCESSORIES ( EXTRA COST)

- |                        |                       |
|------------------------|-----------------------|
| ★ Water Flow Indicator | ★ Fume Extractor      |
| ★ Water Flow Switch    | ★ Anti Vibration Pads |
| ★ Pressure Switch      | ★ MCB/MCCB            |
| ★ Non Return Valve     | ★ Fixture             |
| ★ Chiller Unit         |                       |

Based on product improvements etc. appearance and performance are subject to change without notice

# Kirpekar

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