



सत्यमेव जयते

भारत सरकार  
GOVERNMENT  
OF INDIA

आधिकारिक प्रयोग के लिए  
(For Official Use Only)

# HANDBOOK ON ARTISANS TOOLS FOR OSM, TL & AC DEPOT

CAMTECH/2002/E/TOOLS(GS) /1.0

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Centre  
for  
Advanced  
Maintenance  
TECHnology



Excellence in

महाराजपुर, ग्वालियर - 474 020

Maharajpur, GWALIOR - 474 020

**HANDBOOK  
ON  
ARTISANS TOOLS  
FOR  
OSM, TL & AC Depot**

## FOREWORD

Availability of proper tools with artisan staff is necessary to enhance their productivity. CAMTECH has prepared this hand book which covers the list of conventional as well as modern tools for OSM, TL & AC depot. Details of modern tools like make, model, specification, sources of supply and budgetary cost is also included.

It is recommended that Railways may supply these tools/ similar tools to artisan staff so that they can perform their assigned work efficiently.

***CAMTECH, GWALIOR***

***Date : 26.08.2002***

***M.L. GUPTA***

***EXECUTIVE DIRECTOR***

## PREFACE

It is necessary that proper tools are available with the artisans to increase productivity as well as quality of work. However proper tools are not available with artisan staff in the field. Therefore this handbook has been prepared which include the list of conventional as well as modern tools which should be available for use of artisans. It is recommended that all Railways should make available these tools to artisan staff in OSM, TL & AC depots.

Details of modern tools have been given separately in annexure. Make, price and supplier name given in the handbook is for guidance only. If better tools with reasonable price or tools of same quality with lesser price are available in market, then Railways should procure the same. Information regarding manufacturers, suppliers and prices of modern tools given in annexure of this handbook was collected by staff of this centre from the market. CAMTECH could collect only limited information regarding manufacturers, suppliers, models, specifications and price due to time constraints and other limitations. Therefore Railways/ Indentors/ Users should explore the market to find out more manufacturers, suppliers, models, specifications and exact price.

This handbook does not supercede any instructions issued from Railway board and RDSO.

Technological upgradation and learning is a continuous process. Hence feel free to write to us for any addition/ modification in this handbook. I shall highly appreciate your contribution in this direction.

**CAMTECH/ GWALIOR**  
**Date: 20.08.2002**

**RANDHAWA SUHAG**  
**DIRECTOR/ ELECTRICAL**

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### ***DETAILS OF MODERN TOOLS***

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## ISSUE OF CORRECTION SLIPS

The correction slips to be issued in future for this handbook will be numbered as follows:

CAMTECH/2002/E/TOOLS(GS)/C.S. # XX date-----

Where “XX” is the serial number of the concerned correction slip (starting from 01 onwards).

### CORRECTION SLIPS ISSUED

Sr. No.	Date of issue	Page no. and Item no. modified	Remarks

## **1. INTRODUCTION**

Indian Railways is one of the largest state owned railway system. Very large work force is available to keep the system working efficiently. However the productivity and quality of work has been poor and one of the reason has been that proper tools are not available with them. Therefore availability of proper tools with artisan staff is very necessary to enhance the productivity and quality of work. CAMTECH has prepared this handbook which list out conventional as well as modern tools which should be available with artisan staff of OSM, TL & AC depot. The information was collected by visiting various depots, interaction with field staff, various tools manufacturers and market survey. A seminar was also conducted at CAMTECH in which field personnel from various railways participated and their views and suggestions were considered. It is hoped that this handbook will be very useful in improving the productivity of field staff.

CAMTECH could locate only limited manufacturers/ suppliers due to time constraints and other limitations. Therefore the list of manufacturers/ suppliers indicated for any tool provided in the handbook is no way exhaustive and the Railways/ indenters/ users are free to explore the availability of more manufacturers/ suppliers in the open market. The budgetary estimated cost for the tools is subjected to variation on account of market factors and/ or number of units purchased.



## 2. TOOLS FOR GENERAL SERVICE (OSM) DEPOTS

### 2.1. Tools Kit for lineman

Sr	NAME OF TOOLS	Qty.	Remarks
1.	Combination pliers 150mm	1 no	
2.	Wire Cutter	1 no	For details refer page No. 27
3.	Ball pein hammer 250 gm.	1 no	
4.	Screw drivers set 5 pcs.	1 set	
5.	Double Open End Spanner set (6 to 11)	1 set	
6.	Flat file 12"	1 no	
7.	Hacksaw (12")	1 no	
8.	Torch (4 cell)	1 no	
9.	Adjustable wrench 300mm	1 no	
10.	Line tester	1 no	
11.	Double Test lamp	1 set	
12.	Autoranging Digital Multimeter	1 no.	For details refer page No. 34

## 2.2. Tools Kit for wire man

Sr	NAME OF TOOLS	Qty.	Remarks
1.	Combination pliers 150 mm	1 no	
2.	Wire Cutter	1 no	For detail refer page No. 27
3.	Stripping pliers	1 no	For detail refer page No. 25
4.	Long nose pliers	1 no	
5.	Ball pein hammer 250 gm.	1 no	
6.	Screw driver set (5 pieces) consist of Philips 3.5 x 125 & 5 x 125 Engg.S.Driver 3.5x125 & 6 x 125 Poker 125	1 set	
7.	Double Open End Spanner set (06 to 19)	1 set	
8.	Flat file 12"	1 no	
9.	Hacksaw (12")	1 no	
10.	Torch (4 cell)	1 no	
11.	Auto ranging Digital Multimeter	1 no	For detail refer page No.34
12.	Line tester	1 no	
13.	Adjustable wrench 300 mm	1 no	
14.	Screw Driver (10 x 450 mm)	1 no.	
15.	Multipurpose Portable power drill machine	1 no.	For detail refer page No. 81

### 2.3. Tools Kit for pump fitter

Sr.	NAME OF TOOLS	Qty.	Remarks
1.	Combination pliers 150mm	1 no	
2.	Wire Cutter	1 no	For detail refer page No. 27
3.	Stripping pliers	1 no	For detail refer page No. 25
4.	Long nose pliers	1 no	
5.	Ball pein Hammer (650 gm)	1 no	
6.	Nylon hammer	1 no	
7.	Chiesel (Flat)	1 no	
8.	Centre punch	1 no	
9.	Screw drivers 150,300,450mm	1 set	
10.	Double Open End Spanner set (6 to 32 )	1 set	
11.	Ring Spanner Set (6-32 mm)	1 set	
12.	Water pump pliers (Box joint type)240mm	1 no	
13.	Adjustable wrench 300 mm	1 no.	
14.	Flat file	1 no.	
15.	Hacksaw (12")	1 no	
16.	Torch (4 cell)	1 no	
17.	Test Lamp	1 set	
18.	Auto ranging Digital Multimeter	1 no.	For detail refer page No. 34

## 2.4. Tools Kit for AC mechanic (OSM GROUP)

Sr.	NAME OF TOOLS	Qty.	Remarks
1.	Combination pliers 150 mm	1 no	
2.	Wire Cutter	1 no	For detail refer page No. 27
3.	Stripping pliers	1 no	For detail refer page No. 25
4.	Long nose pliers	1 no	
5.	Ball pein Hammer 250 gm	1 no	
6.	Nylon hammer	1 no	
7.	Screw driver set consist of Philips 3.5 x 125 5 x 125 Engg.S.Driver 3.5 x 125 6 x 125 Poker 125	1 set	
8.	Double Open End Spanner set (6 to19 )	1 set	
9.	Flat file	1 no.	
10.	Hacksaw (12")	1 no	
11.	Torch (4 cell)	1 no	
12.	Line Tester	1 no	
13.	Auto ranging Digital Multimeter	1 no	For detail refer page No. 34
14.	Adjustable spanner 300 mm	1 no	

## 2.5 Tools to be kept in General service depot (OSM Group)

*(Qty. will be decided by divisional officers depending upon work load)*

Sr.	Name of Tools	Remarks
1.	Combination pliers 150, 200 mm	
2.	Wire Cutter	For detail refer page No. 27
3.	Stripping pliers	For detail refer page No. 25
4.	Long nose pliers	
5.	Circlip plier	
6.	Water pump plier (box joint type 240mm)	
7.	Pipe wrench 350mm	
8.	Chain pipe wrench 710,1250 mm	
9.	Ball pein hammer 300, 650 gms & 1 Kg..	
10.	Nylon hammer	
11.	Cross pein Hammer 300 gm., 1 Kg.	
12.	Double Open End Spanner set (6 to 32)	
13.	Ring Spanner (6 to 32 mm)	
14.	Screw Drivers Engineer pattern (6x100 mm, 6x150 mm, 8x300 mm)	

<b>Sr.</b>	<b>Name of Tools</b>	<b>Remarks</b>
15.	Screw Drivers Electrician pattern (4x100 mm, 5x200 mm, 5x300 mm)	
16.	Screw Drivers Philips pattern (6x100 mm, 6x250 mm)	
17.	Screw Drivers Mechanic pattern (6x100 mm, 8x200 mm)	
18.	Heavy Duty Screw Drivers (10x150 mm, 10x300 mm, 10x450mm)	
19.	Flat, Round, Triangular file, 18"	
20.	Hacksaw (12")	
21.	Centre punch	
22.	Chiesel flat	
23.	Torch (4 cell)	
24.	Adjustable spanner 200, 250mm	
25.	Bolt cutter	
26.	Line tester	
27.	Tube cutter	For detail refer page No. 51
28.	Pinching tool	For detail refer page No. 55
29.	Flare tool	For detail refer page No. 62
30.	Allen key (2 to 30 mm)	
31.	Tube bender (3/8", 5/8", 7/8")	For detail refer page No. 37

<b>Sr.</b>	<b>Name of Tools</b>	<b>Remarks</b>
32.	Multipurpose Portable power drill machine	For detail refer page No. 81
33.	Auto ranging Digital Multimeter	For detail refer page No. 34
34.	Earth tester	
35.	Volt meter ( 0 - 500 V)	
36.	Ammeter 0-50 A, 0-400 A.	
37.	Digital Thermometer (0 - 100°C)	For detail refer page No. 53
38.	Infrared heat tracer	For detail refer page No. 73
39.	Digital clamp meter	For detail refer page No. 59
40.	Hydrometer	
41.	Motor operated Meggar (500 V, 1000 V, 2.5 kV, 5 kV)	For detail refer page No. 39
42.	Digital Vernier Calipers	For detail refer page No. 56
43.	Digital Micrometer	For detail refer page No. 64
44.	Portable electric straight grinder	For detail refer page No. 47
45.	Portable electric angular grinder	For detail refer page No. 76
46.	Single sleeve pulley block ( 3 1/2 x 1/2")	
47.	Double sleeve pulley block	

<b>Sr.</b>	<b>Name of Tools</b>	<b>Remarks</b>
48.	Bearing puller	
49.	Digital Spirit level	For detail refer page No. 49
50.	Digital Anemometer	For detail refer page No. 68
51.	Grease gun	
52.	Hot air gun / Hot air blower	For detail refer page No. 66
53.	Winch machine	
54.	Plate cutter	
55.	Manila rope 1/2", 1"	
56.	Nylon rope 1/2", 1"	
57.	Crimping tool ( 0.5 to 6 mm <sup>2</sup> )	For detail refer page No. 23
58.	Crimping tool (1.5 to 16 mm <sup>2</sup> )	For detail refer page No. 23
59.	Soldering iron (60 W)	
60.	De-Soldering Iron	For detail refer page No. 58
61.	Crow bar	
62.	Hydraulic Crimping Machine (upto 400 mm <sup>2</sup> )	
63.	Blower / Dust extractor	For detail refer page No. 42
64.	Steel sling with eye (2, 5, 10m)	
65.	Steel wire brush	



<b>Sr.</b>	<b>Name of Tools</b>	<b>Remarks</b>
66.	Blow lamp small & big	
67.	Pick axe	
68.	Al. self supporting folding ladder ( 6, 10, 14 ft.)	
69.	Al. wall supporting straight ladder ( 8 m )	
70.	Al. wall supporting extension ladder 11m	
71.	Torque wrench	
72.	Adjustable wrench 200, 300mm	
73.	Bolt cutter 450 mm	
74.	Heavy duty Pipe wrench 450,900mm	
75.	Cable cutter	For detail refer page No. 29
76.	Chain pulley block 5T	
77.	Digital light ( lux ) meter	For detail refer page No. 83
78.	1/2" socket set containing 19 socket (11 to 32)with 6 attachment	
79.	All purpose saw	For detail refer page No. 32
80.	Shock Pulse Meter	For detail refer page No. 71
81.	Digital Tachometer	For detail refer page No. 78

<b>Sr.</b>	<b>Name of Tools</b>	<b>Remarks</b>
82.	Capacitance meter	
83.	Acidity test kit	
84.	Oil filtration machine 250 LPH	
85.	Spring balance	
86.	Fuse puller	
87.	BDV oil testing kit	
88.	Distilled water plant	
89.	Acidity testing kit	
90.	Digital insulation tester	For detail refer page No. 44
91.	Leakage current tester	For detail refer page No. 30
92.	Binocular	For detail refer page No. 70

### 3. TOOLS FOR TL MAINTENANCE DEPOTS

#### 3.1. Tools Kit for TL Fitter

Sr	Name of Tools	Qty.	Remarks
1.	Combination pliers 150 mm	1 no.	
2.	Wire Cutter	1 no.	For detail refer page No. 27
3.	Long nose pliers	1 no.	
4.	Screw drivers 150, 300mm	1 each	
5.	4 way key	1 no.	
6.	Double Open End spanner set ( 8 to 36)	1 set	
7.	Adjustable wrench 300mm	1 no.	
8.	Test lamp	1 no.	
9.	Globe key	1 no.	
10.	Hacksaw frame with blade (12")	1 no.	
11.	Flat file	1 no.	
12.	Ball pein Hammer (300 gm)	1 no.	
13.	Electronic line tester	1 no.	
14.	Torch (4 cell)	1 no.	
15.	Fuse puller	1 no.	
16.	Hydrometer	1 no.	
17.	Cell tester	1 no.	
18.	Auto ranging Digital multimeter	1 no.	For detail refer page No. 34

### 3.2. Tools to be kept in TL Depot

*(Qty. will be decided by divisional officers depending upon work load)*

Sr	Name of Tool	Remarks
1.	Combination pliers 150 mm	
2.	Stripping pliers	For detail refer page No. 25
3.	Wire Cutter	For detail refer page No. 27
4.	Long nose pliers	
5.	Screw driver 75,300 mm	
6.	4 way key	
7.	Double Open End spanner set ( 8 to 36)	
8.	Screw driver set consisting of Philips 3.5 x 125 5 x 125 Engg.S.Driver 3.5 x 125 6 x 125 Poker 125	
9.	Adjustable wrench 300 mm	
10.	Test lamp	
11.	Globe key	
12.	Hacksaw frame with blade (12")	
13.	Flat, round, triangular file	
14.	Ball pein Hammer ( 500 gm, 1kg)	
15.	Nylon hammer	
16.	Chiesel flat	

<b>Sr</b>	<b>Name of Tool</b>	<b>Remarks</b>
17.	Electronic line tester	
18.	Infrared heat tracer	For detail refer page No. 73
19.	Torch (4 cell)	
20.	Fuse puller	
21.	Crimping tool ( 0.5 - 1.6 mm <sup>2</sup> )	For detail refer page No. 23
22.	Crimping tool 1.5 - 16 mm <sup>2</sup>	For detail refer page No. 23
23.	Multipurpose Portable power drill machine	For detail refer page No. 81
24.	Auto ranging Digital Multimeter	For detail refer page No. 34
25.	Hydrometer	
26.	Digital clamp meter	For detail refer page No. 59
27.	Pulley Puller	
28.	Belt tensioning gauge	
29.	Tension rod opening wrench	
30.	Portable electric straight grinder	For detail refer page No. 47
31.	Portable welding machine	
32.	Distilled water plant	
33.	Digital light (lux ) meter	For detail refer page No. 83
34.	Cell tester (0-3-0) V DC	
35.	Ammeter ( 0 - 50 A, 0 -100 A)	

<b>Sr</b>	<b>Name of Tool</b>	<b>Remarks</b>
36.	Voltmeter ( 0 - 200 V DC), ( 0 - 500 V AC)	
37.	Digital Tachometer	For detail refer page No. 78
38.	Digital Vernier calipers	For detail refer page No. 56
39.	Digital Micrometer	For detail refer page No. 64
40.	Motor operated Meggar (500 V, 1000 V )	For detail refer page No. 39
41.	Heavy duty Pipe wrench	
42.	Grease gun	
43.	Soldering iron	
44.	Hot air gun / Hot air blower	For detail refer page No. 66
45.	Blow lamp	
46.	Hydraulic crimping machine (upto 300 mm <sup>2</sup> )	
47.	Blower / Dust extractor	For detail refer page No. 42
48.	Ring spanner set 8-36mm	
49.	1/2" socket set containing 19 socket(11 to 32)with 6 attachment	
50.	Torque wrench	
51.	Shock pulse meter	For detail refer page No. 71

<b>Sr</b>	<b>Name of Tool</b>	<b>Remarks</b>
52.	All purpose saw	For detail refer page No. 32
53.	Digital insulation tester	For detail refer page No. 44
54.	Digital thermometer	For detail refer page No. 53
55.	Cable cutter	For detail refer page No.29
56.	De-soldering iron	For detail refer page No. 58

## 4. TOOLS FOR AC COACH MAINTENANCE DEPOTS

### 4.1 Tools Kit for AC Mechanic (AC Coach Depot)

Sr	Name of Tools	Qty.	Remarks
1.	Combination pliers 150mm	1 no.	
2.	Long nose pliers	1 no.	
3.	Screw driver set ( 5 pieces) consisting of Philips 3.5 x 125, 5 x 125 Engg.S.Driver 3.5 x 125, 6 x 125 Poker 125	1 set	
4.	4 way key	1 no.	
5.	Double open end spanner set ( 8 - 32)	1 set	
6.	Single end Open Spanner (36mm)	1 no	
7.	Test lamp	1 no	
8.	Globe key	1 no	
9.	Allen key ( 3- 15m)	1 no	
10.	Flat file	1 no	
11.	Ball pein Hammer 250 gm	1 no	
12.	Torch (4 cell)	1 no	
13.	Auto ranging Digital Multimeter	1 no.	For detail refer page No. 34
14.	Adjustable wrench	1 no.	



## 4.2. Tools to be kept in AC Coach Depot

*(Qty. will be decided by divisional officers depending upon work load)*

Sr	Name of Tools	Remarks
1.	Combination pliers 150mm	
2.	Stripping pliers	For detail refer page No. 25
3.	Wire Cutter	For detail refer page No. 27
4.	Long nose pliers	
5.	SCREW DRIVER SET CONSISTING OF Philips 3.5 x 125, 5 x 125 Engg. Screw .Driver 3.5 x 125 6 x 125 Poker 125	
6.	4 way key	
7.	Ring spanner set ( 8- 32)	
8.	1/2" socket set containing 19 socket (11 to 32)with 6 attachment	
9.	Double open end spanner set ( 8 - 32)	
10.	Single end open Spanner (36mm)	
11.	Wrench for opening tension rod	
12.	Test lamp	
13.	Globe key	
14.	Allen key ( 3- 15m)	
15.	Hacksaw frame with blade (12")	
16.	Flat round, triangular file	

<b>Sr</b>	<b>Name of Tools</b>	<b>Remarks</b>
17.	Ball pein Hammer 250 gm	
18.	Nylon hammer	
19.	Chiesel (Flat) - 8"	
20.	Centre punch	
21.	Infrared heat tracer	For detail refer page No. 73
22.	Crimping tool (0.5 - 6 mm <sup>2</sup> )	For detail refer page No. 23
23.	Crimping tool (1.5 - 1 6 mm <sup>2</sup> )	For detail refer page No. 23
24.	Hydraulic Crimping machine (upto 300 mm <sup>2</sup> )	
25.	Pinching tool	For detail refer page No. 55
26.	Tube bender (3/8", 5/8", 7/8")	For detail refer page No. 37
27.	Flare tool	For detail refer page No. 62
28.	Tube cutter	For detail refer page No. 51
29.	Torch (4 cell)	
30.	Digital Tachometer	For detail refer page No. 78
31.	Digital Clamp meter	For detail refer page No. 59
32.	Hydrometer	
33.	Ammeter ( 0 - 100/200 A.)	
34.	Auto ranging Digital Multimeter	For detail refer page No. 34
35.	Voltmeter ( 0 - 200 V DC), ( 0 - 1000 V AC)	

<b>Sr</b>	<b>Name of Tools</b>	<b>Remarks</b>
36.	Cell tester (0-3-0) volt	
37.	Line tester (electronic)	
38.	Motor operated meggar ( 500 V, 1000 V)	For detail refer page No. 39
39.	Digital Micrometer	For detail refer page No. 64
40.	Digital Vernier calipers	For detail refer page No. 56
41.	Blower / Dust extractor	For detail refer page No. 42
42.	Portable electric straight grinder	For detail refer page No. 47
43.	Torque wrenches	
44.	Pipe wrench	
45.	Grease gun	
46.	Multipurpose Portable Power drill machine	For detail refer page No. 81
47.	Soldering iron	
48.	Hot air gun / Hot air blower	For detail refer page No. 66
49.	Blow lamp	
50.	Shock pulse meter	For detail refer page No. 71
51.	All purpose saw	For detail refer page No. 32
52.	Hot water jet machine	
53.	Vaccum pump	
54.	Pulley puller	
55.	Bearing puller	
56.	Digital Anemometer	For detail refer page No. 68

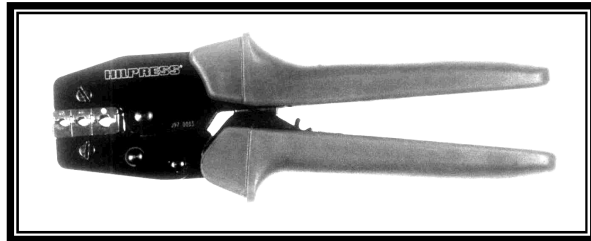
<b>Sr</b>	<b>Name of Tools</b>	<b>Remarks</b>
57.	Digital thermometer	For detail refer page No. 53
58.	Glass thermometer	
59.	Digital light (lux ) meter	For detail refer page No. 83
60.	Belt tensioning gauge	
61.	Pressure gauge (150 - 0 - 150 PSI) and (0-300 PSI)	
62.	Digital insulation tester	For detail refer page No. 44
63.	Cable cutter	For detail refer page No. 29
64.	De-soldering iron	For detail refer page No. 58

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## **ANNEXURE**

# **Details of Modern Tools**

## 1. CRIMPING TOOL



<b>Name</b>	:	Crimping Tool
<b>Application</b>	:	Crimping of lugs.
<b>I. Make</b>	:	M/s JAINSON
<b>Model</b>	:	SMART 16
<b>Crimping range</b>	:	0.5 - 16 mm <sup>2</sup>
<b>Budgetary cost</b>	:	550/-
<b>Source of supply</b>	:	M/s Jainson Pvt. Ltd. Shree Gadia Engg. Works, Mumbai - 400068
<b>II. Make</b>	:	M/s DOWELLS
<b>Model</b>	:	SYT-2
<b>Crimping range</b>	:	1.5 - 16 mm <sup>2</sup>
<b>Budgetary cost</b>	:	700/-

**Source of supply** : M/s Dowells Pvt. Ltd.  
Satguru Estate, Ist Floor,  
Goregaon(E), Mumbai-400063

**III. Make** : M/s HIL PRESH

**Model** : 11731

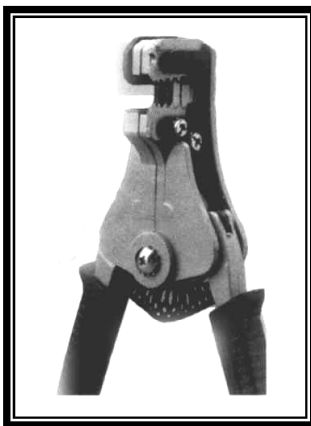
**Crimping range** : 0.5 - 1.5mm<sup>2</sup>  
1.5 - 2.5mm<sup>2</sup>  
4.0 - 6.0mm<sup>2</sup>

**Budgetary cost** : 6,500/-

**Source of supply** : Sold and serviced by  
M/s Sumitron exports Pvt. Ltd.  
P.O. Box 10227, Naraina  
Phase - I, New Delhi - 110 028

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## 2. STRIPPING PLIERS



<b>Name</b>	:	Stripping Pliers
<b>Application</b>	:	Removing of wire insulation for termination.
<b>I. Make</b>	:	M/s AVEN
<b>Model</b>	:	10.105
<b>Size</b>	:	Strips wire up to 7/8".
<b>Features</b>	:	Automatic feature holds jaws open to remove wire without crushing ends. Practically eliminates all nicking, cutting, or fraying. Strips teflon, silicon and PVC wire. Made of aluminium with plastic molded handles.



**Budgetary cost** : Rs.900/-

**Source of supply** : Sold and serviced by  
M/s Sumitron Exports Pvt.  
Ltd. P.O. Box 10227, Naraina  
Phase I, New Delhi - 110 028

**II. Make** : M/s JAINSON

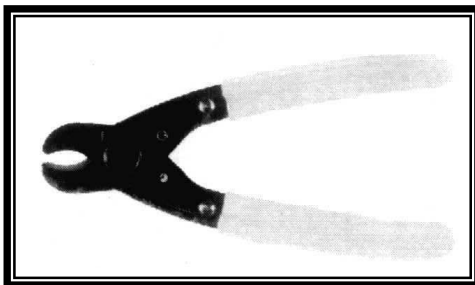
**Size** : Stripping upto 4mm<sup>2</sup>

**Budgetary cost** : Rs. 200/-

**Source of supply** : M/s Jainson Pvt. Ltd.  
Shree Gadia Engg. Works  
Mumbai - 400068

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### 3. WIRE CUTTER



**Name :** Wire Cutter

**Application :** Cutting of cables, wires (solid / stranded)

**I. Make :** M/s JAINSON

**Size :** Cut round cable and wire cutter to multi conductor cable Up to 10 mm<sup>2</sup>

**Budgetary cost :** Rs.200/-

**Source of supply :** M/s Jainson Pvt. Ltd.  
Shree Gadia Engg. Works  
Mumbai-400068

**II. Make :** M/s AVEN

**Model :** 10.102

**Size :** - Cut round cable and wire cutter to multi conductor cable up to 12.7mm  
- Cut solid or stranded wire up to 10mmsq.

**Budgetary cost** : Rs.500/-

**Source of supply** : Marketed by  
M/s Sumitron Export Pvt. Ltd.  
P.O. Box 10227, Naraina  
New Delhi - 110 028

**III. Make** : M/s HILPRESS

**Model** : 11800

**Size** : Cut round cable and wire cutter to  
multi conductor cable up to 16mm<sup>2</sup>

Weight 0.12 kg

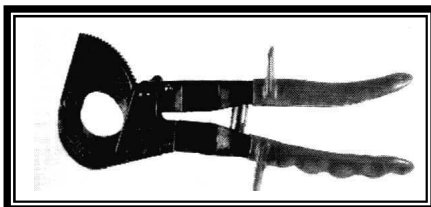
Length 160 mm

**Budgetary cost** : Rs.550/-

**Source of supply** : Marketed by  
M/s Sumitron Export Pvt. Ltd.  
P.O. Box 10227, Naraina  
New Delhi - 110 028

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## 4. CABLE CUTTER



**Name** : Cable Cutter

**Application** : For cutting copper and aluminium cables

**I. Make** : M/s HILPRESS

**Model** : 11852

**Specification** :

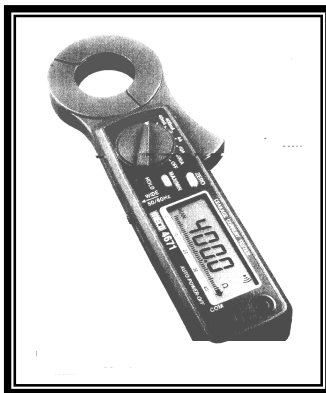
Cutting range	240mm <sup>2</sup>
Maximum outside dia	32mm
Weight	600gm
Length	250mm

**Budgetary cost** : Rs. 13,000/-

**Source of supply** : Marketed by,  
M/s Sumitron Export Pvt. Ltd.  
P.O. Box 10227, Naraina  
New Delhi - 110 028

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## 5. LEAKAGE CURRENT TESTER



**Name** : Leakage Current tester

**Application** : For measuring AC leakage current blowing into ground conductor.

**I. Make** : M/s MECO  
**Model** : 4671

### **Features**

- 10 A Ultra High resolution
- Large conductor diameter (30mm)
- AC current in 5 Ranges (40mA, 400mA, 4A, 40A, 60A)
- Wide Frequency response (40Hz - 1 KHz)
- ACA, ACV, and Continuity
- Large 3¾ Digit LCD (4000 Count)
- Fast bargraph display (20 times/sec.)
- Data hold and Max. Min hold
- Relative measurement
- 600 V rms overload protection in resistance range

## Specification

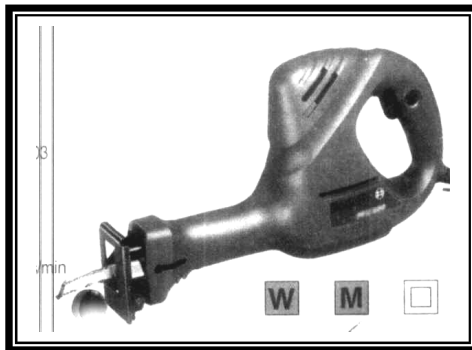
Conductor size	30mm. max. (approx.)
Battery Type	Two 1.5V SUM-3
Display	3¼ LCD with 40 segment bargraph
Range Selection	Manual
Overload Indication	Left Most Digit Blinks
Power Consumption	10mA (approx.)
Low battery indication	<div style="border: 1px solid black; padding: 2px; display: inline-block;">B</div>
Sampling Time	2 time/sec. (display) 20 time/sec. (bar graph)
Operating Environment	-10° to 500°C, RH < 85%
Storage Environment	-20°C to 60°C, RH < 75%
Altitude	up to 2000M
Dimensions	210 (H) x 62(w) x 36(D) mm
Weight	200 gm (battery included)
Accessories	Carrying Case x 1 Users manual x 1 1.5V Battery x 2 Test leads x 1 pair

**Budgetary cost** : Rs. 18,000/-

**Source of supply** : M/s MECO Instruments Pvt. Ltd.  
P.O. Box 6388  
301, Bharat Industrial Estate  
TJ Road, Sewree (W),  
Mumbai - 400 015

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## 6. ALL PURPOSE SAW



**Name** : All Purpose Saw

**Application** : Cutting work of sheet metal, nut/bolts, iron angles, pipes etc.

**I. Make** : M/s BOSCH

**Model** : PFZ 600

**Specifications** :

Saw in wood	130 MM
Saw in steel	20 MM
Power input	600 W
No load stroke rate	2600 stroke/min.
Saw stroke length	28 MM
Weight	3.1 Kg.

**Budgetary cost** : Rs. 10,000/-

**Source of supply** : M/s BOSCH  
Motor Industries Co. Ltd.,  
Power tool division,  
Hosur road, Adugodi,  
BANGALORE - 560030

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7. AUTO RANGING DIGITAL MULTIMETERS



- Name** : Auto Ranging Digital Multimeter
- Application** : Measurement of voltage, current resistance, checking of continuity
- I. Make** : M/s MECO
- Model** : 9A<sub>02</sub>
- Specification** :

Display	Auto/ Manual ranging, 3 <sup>3/4</sup> Digit 3400 count LCD with Analog bargraph
DC Voltage	340mV/3.4/34/340/1000V ± (0.5%rdg + 4 dgt) on 340mV/ 3.4V ± (0.7%rdg + 4 dgt) on 34/340V ± (1.0%rdg + 4 dgt) on 1000V
AC Voltage	3.4/34/340/750V ± (1.0%rdg + 8 dgt) on all ranges except ± (1.5%rdg + 8 dgt) on 750V
DC Current	340μA/3.4/34/340mA/3.4/20A

	$\pm (1.5\% \text{rdg} + 8 \text{ dgt})$
AC Current	340 $\mu$ A/3.4/34/340mA/3.4/20A $\pm (2.2\% \text{rdg} + 4 \text{ dgt})$
Resistance	340 $\Omega$ /3.4/34/340k $\Omega$ /3.4/34M $\Omega$ $\pm (0.7\% \text{rdg} + 4 \text{ dgt})$ on all ranges except $\pm (1.2\% \text{rdg} + 4 \text{ dgt})$ on 3.4M $\Omega$ $\pm (2.5\% \text{rdg} + 4 \text{ dgt})$ on 34M $\Omega$
Diode	Yes
Continuity Buzzer	Yes
Full Icon Display	Yes
Auto power off/ Steep mode	Yes
Low battery display	"BATT" is indicated
Input impedance (Voltage)	10 M $\Omega$
Power	One 9V battery
Battery life	200 hours typical
LCD digit size	17 mm

**Budgetary cost** : Rs. 18,00/-

**Source of supply** : M/s. MECO Instruments Pvt.Ltd.  
P.O. Box 6388, 301  
Bharat Industrial Estate  
TJ road, Sewree (West),  
Mumbai - 400 015

**II. Make :** M/s Motwane

**Model :** DM 3750

**Specification :**

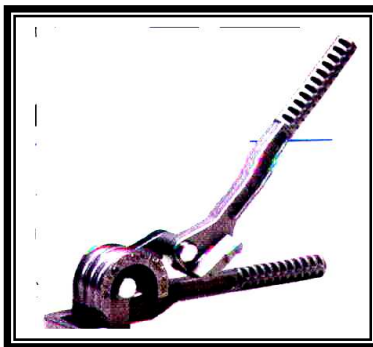
DC Voltage	400mV - 1000V
AC Voltage	400mV - 750V
Resistance	400 $\Omega$ -40 M $\Omega$
ACA/DCA	40 $\mu$ A to 10 A
Frequency	4 KHz to 4 MHz
Capacitance	4 nF to 400 $\mu$ F
Diode and continuity check	Yes

**Budgetary Cost :** Rs. 2800/-

**Source of supply :** M/s Motwane Mfg.Co.Pvt.Ltd.  
Gyan Baug, Nasik Road-422101  
Maharashtra

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## 8. TUBE BENDER

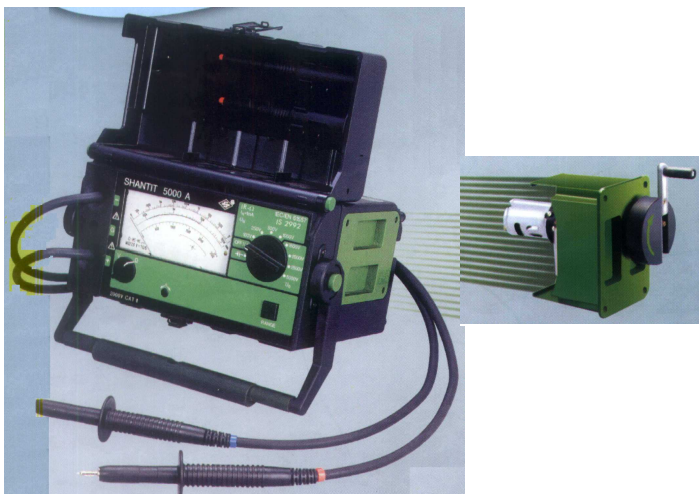


<b>Name of Tool</b>	:	Tube Bender
<b>Application</b>	:	For bending copper tubes used in air conditioning
<b>I. Make</b>	:	Technitools
<b>Model</b>	:	400 PR 153
<b>Description</b>	:	Calibrated angle marking from 10° to 180° for left, right or offset bends. Made of tie cast alloy .
<b>Available Sizes</b>	:	3/8", 5/8", 7/8".
<b>Budgetary cost</b>	:	Rs. 2,550/-
<b>Source of supply</b>	:	Marketed by, M/s Sumitron Export Pvt. Ltd. P.O. Box. 10227, Naraina Phase - I, New Delhi 1100028

<b>II.</b>	<b>Make</b>	:	ATLAS
	<b>Available sizes</b>	:	3/8", 5/8", 7/8".
	<b>Budgetary cost</b>	:	Rs. 1,250/-
	<b>Source of supply</b>	:	Available in local market in major cities..

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## 9. MOTOR OPERATED MEGGAR



**Name** : Motor Operated Meggar  
**Application** : Insulation measurement of cables, motors, transformers etc.

**I. Make** : M/s Shanti Electronic  
**Model** : 5000 AK

### Specification :

Voltage Range	0.1/0.25/0.5/1.0/1.5/2.0/2.5/5.0 kV
Measuring Range	10 K $\Omega$ - 1 T $\Omega$
Supply Voltage	6 x 1.5 V
Voltage measurement	2000 V (AC or DC)
Dimension	290 x 250 x 140 mm
Weight	3.4 kg

**Budgetary cost** : 27000/-

**Source of supply** : M/s Shanti Electronic Instrument  
A 54, MIDC, Andheri East  
Mumbai - 400 093

**II. Make** : M/s Motwane

**Model** : B50K

**Specification :**

Resistance indicating device	Analog Moving coil meter
Scale length	89 mm
Effective Range of measurement	0 - 50 G $\Omega$ and $\infty$
First effective range	50 M $\Omega$ to 5 G $\Omega$
Second effective range	5 G $\Omega$ to 50 G $\Omega$
Accuracy - <ul style="list-style-type: none"> <li>First effective range</li> <li>Second effective range</li> <li>Max. deviation of pointer from any marked position</li> <li>Zero and infinity marks</li> </ul>	<ul style="list-style-type: none"> <li><math>\pm 5\%</math> of reading</li> <li><math>\pm 10\%</math> of reading</li> <li><math>&lt;\pm 1\text{mm}</math></li> <li><math>\pm 0.7\%</math> of scale length</li> </ul>
Terminal voltage (DC) <ul style="list-style-type: none"> <li>Rated terminal voltage</li> <li>Accuracy</li> </ul>	2500 V and 5000 V $<\pm 10\%$ at infinity scale mark. More than 90% at centre scale mark.

**Budgetary cost** : 24,000/-

**Source of supply** : M/s Motwane Mfg. Co. Ltd.  
Gyan Baug, Nasik Road- 422 101  
Maharashtra

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## 10. BLOWER/DUST EXTRACTOR



**Name :** BLOWER/DUST EXTRACTOR

**Application :** Blowing of dust from equipment.

**I. Make :** M/s BOSCH

**Model :** GBL 550

**Specifications :**

Power input	550 W
Pressure	800 mm Aq
Air volume	2.7 M <sup>3</sup> /Min.
Weight	1.7 Kgs.

**Budgetary cost :** Rs. 3,500/-

**Source of supply :** M/s BOSCH  
Motor Industries Co. Ltd.,  
Power tool division,  
Hosur road, Adugodi,  
BANGALORE - 560030

**II. Make : M/s KPT**

**Model : KB-20**

**Specifications :**

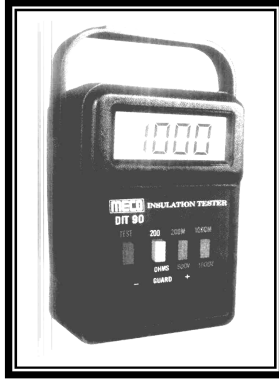
Power input	360 W
Air volume	2.3 M <sup>3</sup> /Min.
No load speed	13000 rpm
Net weight	1.6 kg
Overall length	428 mm

**Budgetary cost : Rs. 2,780/-**

**Source of supply :** M/s KPT Sales and Service Ltd.  
309, Vasant Vihar  
Commercial Complex,  
Dr. C.Gidwani Road,  
Chembur, Mumbai – 400074,  
Maharashtra (India)

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## 11. DIGITAL INSULATION TESTER



**Name :** DIGITAL INSULATION TESTER

**Application :** For measuring the insulation resistance of motors, cables and other electrical equipment.

**I. Make :** M/s MECO

**Model :** DIT - 90

### Features

- Large 0.7" LCD display
- Battery operated
- High accuracy  $\pm (3\% + 1\text{dgt})$  at  $27^\circ\text{C}$
- 0.05% Resolution
- Portable with Lockable Handle
- Low Ohms range for continuity measurement
- Over range and low battery indication
- Auto zero
- Automatic circuit discharge
- Housed in unbreakable ABS case

**Specification :**

Range	<ul style="list-style-type: none"> <li>• 1.0-200 M Ohms at 500V</li> <li>• 2.0-1000 M Ohms at 1000V</li> <li>• 3.0-200 Ohms (continuity check)</li> </ul>
Dimensions	175 (H) x 128 (W) x 83 (D) mm.
Weight	Approx. 700 gms (with battery)
Standard Accessories	<ul style="list-style-type: none"> <li>• Pair of test leads</li> <li>• 6 Pcs. 1.5V ("AA" size, pencil cell) fitted in Instruction Manual</li> </ul>

**Budgetary cost** : Rs.4500/-

**Source of supply** : M/s MECO Instruments Pvt. Ltd.  
P.O. Box 6388  
301, Bharat Industrial Estate  
TJ Road, Sewree (W),  
Mumbai - 400 015

**II. Make : IDEAL**  
**Model : 61-780**

**Features**

- Battery powered - no need to hand crank
- Low power consumption
- Compact and light weight

**Specification**

Item	Range & Resolution	Accuracy
Display	Digital	--
Test voltage	1000V	--
Insulation Resistance	20.0/ 200 M $\Omega$	2.0%

**Budgetary cost** : Rs. 14,500/-

**Source of supply** : Marketed by,  
M/s Sumitron Export Pvt. Ltd.  
P.O.Box 10227, Naraina  
Phase - I New Delhi 110 028

**III. Make** : AGRONIC

**Model** : IT 2V

**Specification :**

Display	Digital
Test voltage	500V/ 1000V
Insulation Resistance	0 - 2000 M $\Omega$
Resolution	1 M $\Omega$

**Budgetary cost** : Rs. 4,000/-

**Source of supply** : Marketed by,  
M/s Agarwal Electronics  
201, Shiv Shakti  
Industrial Estate,  
Near Shreyas Talkies  
L.B.S. Marg, GhatKoper (W)  
Mumbai - 400 086

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## 12. PORTABEL ELECTRIC GRINDER



**Name** : Straight Grinder  
**Application** : For grinding, sanding, rust removing etc.

**I. Make** : M/s BOSCH

**Model** : GGS 27

**Specifications** :

Grinding points	MAX. 25 MM DIA
No load speed	27000 RPM
Power input	500 W
Tool holder	Collet-Cap Max.8 MM DIA
Spindle collar dia	43 MM
Weight	1.3 Kgs.

**Budgetary cost** : Rs. 8,800/-

**Source of supply** : M/s BOSCH Motor Industries Co. Ltd.,  
 Power tool division,  
 Hosur road, Adugodi,  
 Bangalore – 560030

**II. Make** : M/s KPT

**Model** : KP 77-01

**Specifications** :

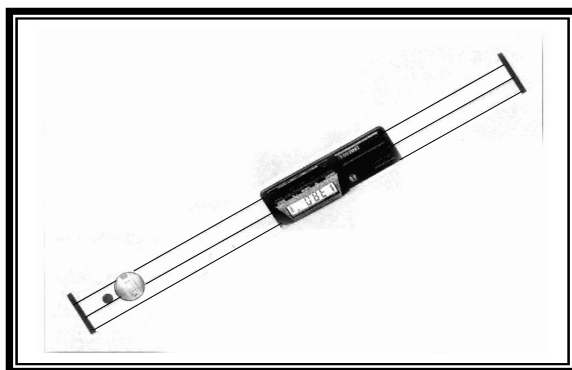
Grinding wheel dia	150 mm
No load speed	5500 RPM
Power input	240 V, 1800 W
Weight	7.1 Kgs.
Overall length	610 mm

**Budgetary cost** : Rs. 12680 /-

**Source of supply** : M/S KPT Sales and Service Ltd.,  
309, Vasant Vihar Commercial  
Complex, Dr. C.Gidwani Road,  
Chembur, Mumbai – 400074,  
Maharashtra India

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### 13. DIGITAL SPIRIT LEVEL



**Name :** Digital Spirit Level

**Application :** Checking of alignment of foundations of pumps, transformers, DG sets etc. and other applications which require accurate level.

**I. Make :** M/s BOSCH

**Model :** DNM 60L

**Specification :**

Length	600mm
Measuring Accuracy at 0°/ 90°	max. $\pm 0, 05^\circ$
Measuring Accuracy at 1°to 89°	max. $\pm 0, 2^\circ$
Battery	9V DC6 LR 61

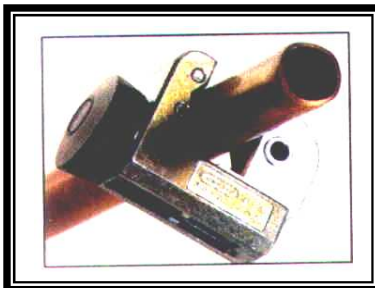


**Budgetary cost** : Rs. 8650/-

**Source of supply** : M/s BOSCH  
Motor Industries Co. Ltd.,  
Power tool division,  
Hosur road, Adugodi,  
Bangalore - 560030

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## 14. TUBE CUTTER



<b>Name of Tool</b>	:	Tube Cutter
<b>Application</b>	:	To cut copper tubes used in air-conditioning.
<b>I. Make</b>	:	Techni Tools
<b>Model</b>	:	400 PR 129
<b>Features</b>	:	Larger knob for greater torque, harden flare grooved roller
<b>Size</b>	:	1/8" to 7/8"
<b>Budgetary cost</b>	:	Rs. 950/-
<b>Source of supply</b>	:	Marketed by, M/s Sumitron Export Pvt. Ltd. P.O. Box. 10227, Naraina Phase - I, New Delhi 1100028

- II. Make/ Model : ASIAN**
- Size : 1/8" to 1-1/8"**
- Budgetary cost : Rs. 400/-**
- Source of supply : Available in Local market in major cities.**
- III. Make : CPS**
- Model : TC 274**
- Size : 1/8" to 1-1/8"**
- Budgetary cost : Rs. 1,050/-**
- Source of supply : Marketed by,  
M/s Goyal Electronics Industries  
319,Prasad Chambers,  
Opera House, Mumbai - 400 004**

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## 15. DIGITAL THERMOMETER



**Name :** Digital Thermometer

**Application :** For measuring the temperature and relative humidity.

**I. Make :** EXTECH (Temp/ Humidity Pen)

**Model :** 608-952

**Features :** Simultaneous readout of °C or °F (switchable) and % RH. Minimum/ Maximum memory functions for both temperature and humidity

**Specification :**

Range	30 to 90% RH 0-50 °C Temp.
Resolution	1% RH, 0.1°F or °C

**Budgetary cost** : Rs. 7,500/-

**Source of supply** : Marketed by,  
M/s S.S.Tools (India Pvt. Ltd)  
234, IInd Floor, Ajmeri Gate,  
Delhi 110 006

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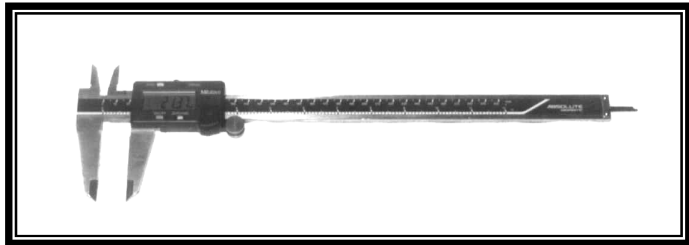
## 16. PINCHING TOOL



<b>Name of Tool</b>	: Pinching Tool
<b>Application</b>	: For squeezing the copper tube used in air-conditioning.
<b>I. Make</b>	: CPS
<b>Model</b>	: TLPO
<b>Size</b>	: 1/4"
<b>Budgetary cost</b>	: Rs. 1,470/-
<b>Source of supply</b>	: Marketed by, M/s Goyal Electronic Industries 319, Prasad chambers, Opera House, Mumbai-400 004
<b>II. Make/ Model</b>	: ASIAN
<b>Size</b>	: 1/4 ", 3/8", 5/8"
<b>Budgetary cost</b>	: Rs. 350/-
<b>Source of supply</b>	: Available in Local market in major cities.

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## 17. DIGITAL VERNIER CALLIPERS



- Name** : Digital Vernier Calipers
- Application** : Measurement of depths, gaps, thickness, outside and inside diameters etc.
- Make** : M/s Mitutoyo/ Japan
- Model** : 500-197
- Specification** :

Measuring range	0 - 200 mm
Resolution	0.01 mm
Instrumental error	$\pm 0.03$ mm or $\pm .0015''/+0.03$ mm
Repeatability	0.01 mm or .0005''/0.01 mm
Maximum response speed	Not particularly provided (No counting error due to scale speed)
Power supply	SR44 (silver oxide cell, 1 pc
Battery life	3.5 years under normal use
Operation temperature	0 <sup>0</sup> C to 40 <sup>0</sup> C
Storage temperature	-10 <sup>0</sup> C to 60 <sup>0</sup> C

**Budgetary cost** : Rs. 7700/-

**Source of supply** : Marketed by  
M/s Industrial Consultants & Traders  
B-345, Nehru Ground,  
Opposite, PNB, Faridabad  
(Generally available in local  
market also)

**II. Make** : M/s General

**Model** : 400 PR 209

**Description** :  
Measuring range, 0-150 mm.  
Outside, inside & depth measurement. Read  
out on the high contrast LCD display.  
Floating zero checks deviation from  
reference size. True inch/ metric conversion  
without re-zeroing. Switching inch/metric  
selector with resolution to .0005 inch or  
.01mm.

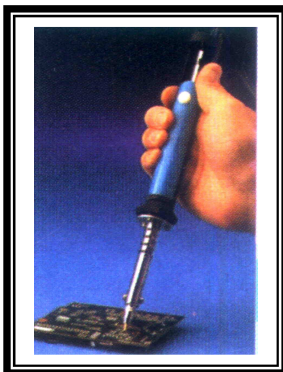
**Budgetary cost** : Rs. 10,000/-

**Source of supply** : Marketed by  
M/s Sumitron Exports Pvt. Ltd.  
P.O. 10227 Naraina,  
New Delhi 110 028

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## 18. DE- SOLDERING IRON



**Name** : De-Soldering Iron

**Applications** : Removal of solder joint

**I. Make** : M/s AVEN

**Model** : 17.522-220

**Description** :

Rugged, manual loading tool for volume de-soldering. High vacuum heavy-duty plastic, fully enclosed shaft for safety. Plunger locks for compact storage.

**Budgetary cost** : Rs.2000/-

**Source of Supply** : Marketed by

M/s Sumitron Exports Pvt. Ltd.

P.O. Box - 10227, Naraina

Phase - I, New Delhi - 110 028

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## 19. DIGITAL CLAMPMETERS



**Name** : Digital Clamp meter

**Application** : On line measurement of current, voltage, resistance, frequency

**Make** : M/s MECO

**Model** : 2250F

**Specification** :

AC Current	20A, 200A, 1000 A
Accuracy	$\pm (2\% \text{rdg} + 4 \text{dgt})$ on 200/1000A $\pm (3\% \text{rdg} + 4 \text{dgt})$ on 20A
Over load	1000 A AC max. for 1 min.
AC Voltage	200v, 750V (50-500 Hz)
Accuracy	$\pm (1.2\% \text{rdg} + 4 \text{dgt})$ on 200V $\pm (1.5\% \text{rdg} + 4 \text{dgt})$ on 750V
DC Voltage	2V( in 2250 only), 200V, 1000V

Accuracy	$\pm (0.5\% \text{rdg} + 1 \text{ dgt})$ on all ranges
Resistance	200 $\Omega$ , 200K $\Omega$
Frequency	10 Hz - 34 MHz ( $\pm 1\% \text{rdg} + 2 \text{ dgt}$ )
Accuracy	$\pm (1\% \text{rdg} + 1 \text{ dgt})$ on all ranges in 2250 and $\pm (1.5\% \text{rdg} + 3 \text{ dgt})$ on all ranges in 2250F
Audible continuity diode test function power	One 9 V battery
Battery life	200 hours typical
Low battery	"BATT" is indicated in 2250
Dimension	250(H)x98(W)x35(D)mm
Weight	400 gms approx.
Accuracy	Supplied with a pair of test leads, carrying case, battery and instruction manual
Jaw opening	55mm max.

**Budgetary cost** : Rs. 2,000/-

**Source of supply** : M/s MECO Instruments Pvt. Ltd.  
P.O. Box 6388, 301  
Bharat Industrial Estate  
TJ road, Sewree (West),  
Mumbai - 400 015

**II. Make :** Motwane

**Model :** DCM 30A

**Specification :**

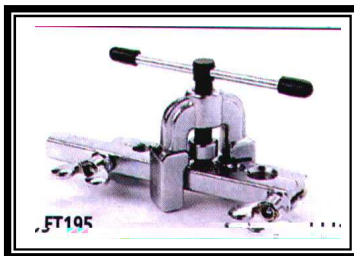
Jaw size	50 mm
AC Current	20 A, 200 A, 1000A
DC Voltage	200V, 1000 V
AC Voltage	200 V, 700 V
Frequency	2KHz to 20 MHz
Resistance	2 K $\Omega$ to 20 M $\Omega$
Diode continuity check	Yes

**Budgetary cost :** Rs. 2600/-

**Source of supply :** M/s Motwane Mfg.Co. Pvt.Ltd  
Gyan Baug, Nasik Road-422101  
Maharashtra

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## 20. FLARE TOOL



<b>Name of Tool</b>	:	Flare Tool
<b>Application</b>	:	For making flare shape for copper pipes used in air-conditioning.
<b>I. Make</b>	:	CPS
<b>Model</b>	:	FT-195
<b>Size</b>	:	3/16" TO 5/8"
<b>Budgetary cost</b>	:	Rs. 732/-
<b>Source of supply</b>	:	Marketed by, M/s Goyal Electronics Industries 319, Prasad Chambers, Opera House, Mumbai - 400 004
<b>II. Make/ Model</b>	:	ASIAN
<b>Size</b>	:	3/16" TO 5/8"
<b>Budgetary cost</b>	:	Rs. 600/-
<b>Source of supply</b>	:	Available in local market in major cities.

<b>III. Make/ Model</b>	<b>:</b>	IMPERIAL
<b>Size</b>	<b>:</b>	3/16" TO 5/8"
<b>Budgetary cost</b>	<b>:</b>	Rs. 1,600/-
<b>Source of supply</b>	<b>:</b>	Available in local market in major cities..

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## 21. DIGITAL MICROMETER



**Name** : Digital Micrometer

**Application** : Measurement of small thickness and diameters of wires etc.

**I. Make** : M/s Mitutoyo/ Japan

**Model** : 293-811

**Specification :**

Measuring range	0 - 25 mm
Instrumental error (20°C)	$\pm (L/75)$
Resolution	0.001 mm (.0005")
Quantizing error	$\pm 1$ count
Measuring force	5 to 10N
Display	LCD (6 digits and a minus sign)
Power Supply	SR44x1
Battery life	1.2 years
Operation temperature	5 <sup>0</sup> C to 40 <sup>0</sup> C
Storage temperature	-10 <sup>0</sup> C to 60 <sup>0</sup> C

**Budgetary cost** : Rs. 5500/-

**Source of supply** : Marketed by  
M/s Industrial Consultants &  
Traders  
B-345, Nehru Ground,  
Opp., PNB, Faridabad.

**II. Make** : M/s Central

**Model** : 66-811

**Description** : Measure diameter  
and thickness between 0 - 1 inch  
(0-25 mm) with 0.0001 inch  
(0.001 mm) resolution. Ratchet  
spindle clicks when contact  
pressure is correct or measuring

**Budgetary cost** : Rs. 7000/-

**Source of supply** : Marketed by  
M/s Sumitron Export Pvt. Ltd.  
P.O. 10227, Naraina,  
New Delhi - 110028

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## 22. HOT AIR GUN/HOT AIR BLOWER



**Name** : Hot Air Gun/Hot Air Blower

**Application** : Drying of moisture of silica jel, drying of varnish of motors coil, drying of moisture of control panels, relays, CTs, PTs etc.

**I. Make** : M/s BOSCH

**Model** : GHG 600 CE

### Specifications :

Rated power consumption	2000 W
Temperature range	100-600 <sup>0</sup> C
Air flow rate	350-550 Lit/min
Stepless temp. control	Yes
Airflow regulation	2 stage
Weight	0.7 Kgs.

**Budgetary cost** : Rs. 4250/-

**Source of supply** : M/s BOSCH  
Motor Industries Co. Ltd.,  
Power tool division,  
Hosur road, Adugodi,  
BANGALORE - 560030

**II. Make** : M/s KPT

**Model** : KHG

**Specifications :**

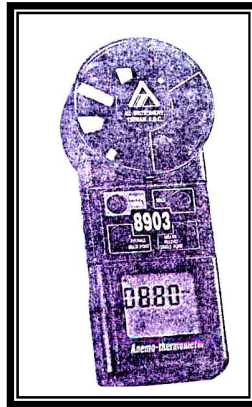
Rated power consumption	2000 W
Temperature range	480-600 <sup>0</sup> C
Air flow rate	250-380 Lit/min
Weight	0.9 Kgs.

**Budgetary cost** : Rs. 2845/-

**Source of supply** : M/s KPT Sales and Service  
Ltd.  
309, Vasant Vihar  
Commercial Complex,  
Dr. C.Gidwani Road,  
Chembur, Mumbai – 400074,  
Maharashtra (India)

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## 23. DIGITAL ANEMOMETER



**Name** : Digital Anemometer

**Application** : To measure the air flow velocity of blowers

**I. Make** : CE

**Model** : AZ 8903

**Specification** :

	Range	Resolution	Accuracy
Air Flow	80 - 6900 ft/min.	1	+/- 3% FS
	0.4 - 35 m/sec	0.01	+/- 3% FS
Temp.	-10°C to 50° C	0.1	+/- 1.0°C
	+14°F to 122°F	0.1	+/- 2.0 °F
Battery Life	100 Hours		
Display Type	LCD		
Display Size	37mm x 42mm		

	Range
Max. Reading	9999
Dimensions	183 mm(L) x 76mm (W) x 45mm (D)
Fan Diameter	70mm ( 2 7/8")

**Budgetary cost** : Rs. 4,400

**Source of supply** : Marketed by  
M/s Hindustan Refrigeration Stores  
2, 4 & 5, Netaji Subhash Marg  
Dariyaganj, New Delhi-110002

**II. Make** : AGRONIC

**Model** : 8903

**Specification** :

Anemometer with temperature measurement, 0.40 to 35.00 meters/second, 80 to 6900 feet/ minutes, -10.0 to + 50.0°C, + 14.0 to 122.0 °F, hand held, battery operated, 4 digit.

**Budgetary cost** : Rs. 5500/-

**Source of supply** : Marketed by,  
M/s Agarwal Electronics  
201, Shiv Shakti Industrial Estate,  
Near Shreyas Talkies, L.B.S. Marg,  
GhatKoper (W), Mumbai - 400 086

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## 24. BINOCULAR



<b>Name</b>	:	Binocular
<b>Application</b>	:	Inspection of overhead lines, insulators, and overhead gantry.
<b>I. Make</b>	:	M/s Samsung
<b>Model</b>	:	B-8 x 25N
<b>Description</b>	:	Binocular having magnifying power of 10 times Lens diameter, 25mm adjustable focusing
<b>Budgetary cost</b>	:	Rs. 5,000/-
<b>Source of supply</b>	:	Authorised dealers of M/s. Samsung.

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## 25. SHOCK PULSE METER



**Name** : Shock Pulse Meter

**Application** : Used for monitoring health of bearings of pump motors, DG sets, alternators, compressor motors & other motors.

**I. Make** : M/s SPM

**Model** : T 2000

**Specifications :**

Measuring range, SPM	-9 to 99 dbsv
Resolution, SPM	1 dbsv
Measuring range, VIB	0.5 to 99.9 mm/s RMS
Resolution, VIB	0.1 mm/s
Measuring range, TAC	10 to 20 000 r.p.m. optical
Measuring distance	max. 0.6 m
Resolution, TAC	1 r.p.m.

Temperature range	0° to 50°C
Power	6 x 1.5 V LR6 cells
Display	Liquid crystal
Dimensions	300 x 150 x 85 mm
Weight	0.85 Kgs.

**Budgetary cost** : Rs.35, 000/-

**Source of supply** : M/s SPM Instrument India Pvt. Ltd.  
7-1-27/1, Srinivasa Complex, Ameerpet,  
Hyderabad - 500 016

**II. Make** : M/s MAYNARD  
**Model** : M - 2021T  
**Specifications** :

Measuring range	0 to 100 db
Resolution	1 db
Temperature range	0° to 50°C
Power	2 x 9V (6LR61 duracells)
Display	16 x 2 line dot matrix LCD
Dimensions	245 x 120 x 53 mm
Weight	0.8 Kgs.

**Budgetary cost** : Rs.25, 500/-

**Source of supply** : Marketed by  
M/s Gannon Dunkerley & Co., Ltd.  
P.B. 1547, Chartered Bank Building,  
M.G. Road, Fort, Mumbai -1

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## 26. INFRARED HEAT TRACER



**Name** : Infra Red Heat Tracer

**Application** : Measurement of temperature of joints, connectors and other electrical equipments.

**I. Make** : M/s Raytek

**Model** : Raynger ST 60 ProPlus

**Specification** :

Battery operated non contact thermometer suitable to read -32 to 600° C with circular laser beam and LED display.

Temperature range	- 32 to 600° C
Repeatability	$\leq \pm 0.5 \%$ or $\leq \pm 1^{\circ}\text{C}$ ( $\pm 2^{\circ}\text{F}$ ), whichever is greater
Response time	$\leq 0.5$ Sec, 95% response
Ambient operating range	0 to 50 °C
Power	9 v Alkaline or Ni Cd Battery



Weight	320 gms.
Distance to spot	30 : 1
Laser Sighting	Offset 8 Point circular
Data logging	12 point
Display resolution	0.1 °C/ F

**Budgetary cost** : Rs. 22000/-

**Source of supply** : Marketed by,  
M/s Electronics Instrument Company  
2nd Floor, 62- Prashant Building,  
Janmbhumi Marg, Fort,  
Mumbai 400 001

**II. Make** : M/s MAYNARD  
**Model** : M - 9  
**Specification** :

Battery operated non contact thermometer suitable to read -10 to 400° C with circular laser beam and LED display.

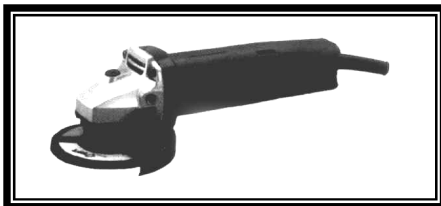
Temperature range	-10 to 400° C
Resolution	1 °C
Accuracy	± 2 °C
Response time	500 ms
Field of view	4 : 1
Power	9 v Battery
Display	LCD
Dimensions	126 x 75 x 29 mm

**Budgetary cost :** Rs. 7000/-

**Source of supply :** Marketed by  
M/s Gannon Dunkerley & Co., Ltd.  
P.B. 1547, Chartered Bank Building,  
M.G. Road, Fort, Mumbai - 400 001

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## 27. PORTABLE POWER ANGULAR GRINDER



**Name :** Angular Grinder

**Application :** For grinding welding spots/ joints back gouging, sanding and rust removing.

**I. Make :** M/s BOSCH

**Model :** GWS 6-100

### Specifications:

Grinding & cutting discs	100 MM DIA
Rubber packing pad	100 MM DIA
Cup brushes	60 MM DIA
No load speed	11000 RPM
Power input	670 W
Weight	1.4 Kgs.

**Budgetary cost :** Rs. 4,200/-

**Source of supply :** M/s BOSCH Motor Industries Co. Ltd.,  
Power tool division, Hosur road,  
Adugodi, Bangalore - 560 030.

**II. Make :** M/s KPT

**Model :** KR 100

**Specification :**

Grinding & cutting discs	100 MM DIA
No load speed	12000 RPM
Power input	670 W
Weight (w/o wheel)	1.5 Kgs.

**Budgetary cost :** Rs. 4,000/-

**Source of supply :** M/s KPT Sales and Service Ltd.  
309, Vasant Vihar Commercial  
Complex, Dr. C.Gidwani Road,  
Chembur, Mumbai – 400074,  
Maharashtra India

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## 28. DIGITAL TACHOMETER



**Name** : Digital Tachometer

**Application** : Safe and accurate measurement of RPM without attachment to the motor or any other rotary object.

**I. Make** : M/s MASTECH

**Model** : DT 2234A

**Description** : Non contact type MASTECH brand digital tachometer, Model DT - 2234A having measurement ranges 5 to 99999 RPM complete with brief case type carrying case, reflective tape and batteries.

**Specification :**

Test range	5 to 99999 RPM $\pm$ 0.05 %
Sampling time	1 Second (Over 60 RPM)
Test range select	Automatic
Memory	Last value, Max. value, Min. value
Detecting distance	50 to 150 mm (Max. 300 mm)
Max. display/ LCD size	99999/ 18.5 x 48 mm
Dimension	72 x 190 x 38 mm
Weight	250 g

**Budgetary cost :** Rs. 2500/-

**Source of supply :** Marketed by  
M/s Instruments & Machinery Sales Corp,  
58/ 1, Goa Mansion, 2nd Floor,  
Goa street, P.O. Box No. 1872  
Fort, Mumbai - 400 001.

**II. Make :** AGRONIC

**Model :** 81-C

**Description :**

Non contact type with reflective type of infrared sensor, 60 - 20,000 RPM

**Budgetary cost** : Rs. 3,500/-

**Source of supply** : Marketed by,  
M/s Agarwal Electronics  
201, Shiv Shakti Industrial Estate,  
Near Shreyas Talkies, L..B.S. Marg,  
GhatKoper (W) , Mumbai - 400 086

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## 29. MULTI PURPOSE PORTABLE POWER DRILL MACHINE



**Name** : Multi purpose portable power drill machine

**Application** : Drilling of holes in metal, concrete and wood.

**I. Make** : M/s BOSCH

**Model** : GBM 10

### Specifications :

Power input	400 W
Impact rate	44800 / min.
R.P.M.	2200/2800 RPM
Weight	1.4 Kg
Battery backup in min.	NA
Volt/amp./watts	230V
Dia. in concrete	10 MM
Dia. in metal	8 MM
Dia. in wood	20 MM



**Budgetary cost** : Rs. 3885/-

**Source of supply** : M/s BOSCH  
Motor Industries Co. Ltd.,  
Power tool division,  
Hosur road, Adugodi,  
BANGALORE - 560030

**II. Make** : M/s KPT

**Model** : PR 110

**Specifications :**

Power input	400 W
R.P.M.	2800 RPM
Weight	1.4 Kg
Volt	230V
Dia. in concrete	10 MM
Dia. in metal	10 MM
Dia. in wood	25 MM

**Budgetary cost** : Rs. 3200/-

**Source of supply** : M/s KPT Sales and Service  
Ltd\_309, Vasant Vihar  
Commercial Complex,  
Dr. C.Gidwani Road,  
Chembur, Mumbai – 400074,  
Maharashtra (India)

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### 30. DIGITAL LIGHT (LUX) METER



**Name** : Digital Light (Lux) Meter

**Application** : For measuring the intensity of light.

**I. Make** : IDEAL  
**Model** : 61-681

#### Features

- Wide light range
- Remote light sensor
- Cosine and color corrected
- Compact & light weight
- Low battery indication

#### Specification :

	Range/ Resolution	Accuracy
Foot candle	20.00/ 200.00/ 2000.0/ 20.000	2%
Lux	20.00/ 200.00/ 2000.0/ 20.000	2%

**Budgetary cost** : Rs. 15,000/-

**Source of supply** : Marketed by  
Sumitron Export Pvt. Ltd.  
P.O. Box -10227, Naraina  
Phase-I, New Delhi-110028

## II. **Make/ Model :** EXTECH

### **Features**

- Heavy duty light meter
- Large easy to read 1.4" LCD display
- Record/ Recall mini., Max and AVG reading
- Auto shut off.

### **Specification :**

	Range	Accuracy
Foot candle	200, 2000, 5000	4%
Lux	2000, 20000, 50000	4%

**Budgetary cost** : Rs. 21,000/-

**Source of supply** : Marketed by  
M/s S.S.Tools (India Pvt. Ltd.)  
234, IInd Floor, Ajmeri Gate  
Delhi - 110 006

**III. Make : AGRONIC**

**Model : LX-101**

**Specification :**

Digital LUX meter, 3½ digit, hand held battery  
operated 0 to 2000/ 20000/ 50000 LUX

**Budgetary cost : Rs. 3,000/-**

**Source of supply :** Marketed by,  
M/s Agarwal Electronics  
201, Shiv Shakti  
Industrial Estate,  
Near Shreyas Talkies  
L.B.S. Marg, GhatKoper (W)  
Mumbai - 400 086

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