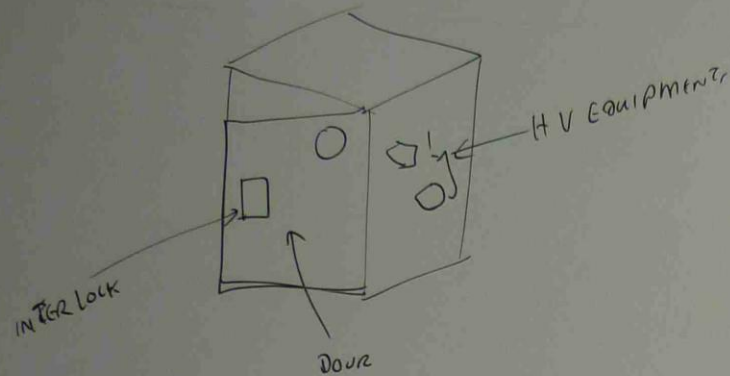


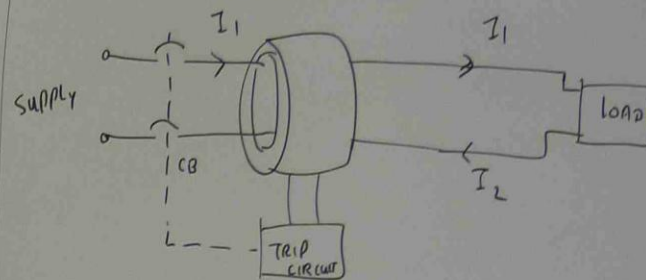
## ELECTRICAL SAFETY INTERLOCK



WITHOUT SWITCHING OFF THE ELECTRICAL SUPPLY, THE DOOR CAN NOT BE OPENED.

## RCD

(RESIDUAL CURRENT DEVICE)



CB - CIRCUIT BREAKER

RCD

$I_1$  = CURRENT FROM SUPPLY TO LOAD

$I_2$  = RETURN CURRENT

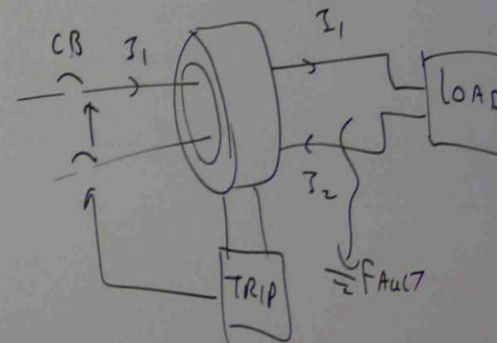
NORMAL

$$I_1 = I_2$$

EARTH FAULT

$$I_1 \neq I_2$$

TRIP CIRCUIT IS ENERGIZED. OPEN C.B



RCDs ARE DESIGNED TO PROTECT THE EARTH LEAKAGE FAULT. THEY CAN NOT GIVE THE PROTECTION FOR FULL RANGE OF ELECTRICAL FAULTS.

### DANGER TAGGING

WHEN THE ELECTRICAL TRADE PERSON IS WORKING ON HIGH POWER SYSTEM, THE MAIN SWITCH NEEDS TO BE SWITCHED OFF, LOCKED AND KEEP THE KEY.

DANGER TAG IS TO BE HANGED ON THE SWITCH BOARD NOTIFYING ANY ONE NOT TO INTERFERE WITH SUPPLY SYSTEM.

### RESCUE FROM LIVE ELECTRICAL SITUATION

IF THE APPROPRIATE SWITCH OR CIRCUIT BREAKER CAN BE QUICKLY IDENTIFIED & REACHED, QUICKLY SWITCH OFF THE SUPPLY, REMOVE THE VICTIM FROM THE HAZARD AREA AND BEGIN ARTIFICIAL RESUCITATION WITHOUT DELAY.

WHEN THE SWITCH CAN NOT BE POSITIVELY IDENTIFIED, OPEN ALL SWITCHES OR CIRCUIT BREAKERS

IF THE SWITCH OR SWITCHES CAN NOT BE OPERATED READILY, THE ACTION TO BE TAKEN DEPENDS ON THE VOLTAGE TO WHICH VICTIM IS CONNECTED.

FOR LOW VOLTAGE (MORE THAN 32 V AC) LESS THAN 1000 V AC, USE NON CONDUCTING MATERIALS SUCH AS RUBBER GLOVES, PLASTIC, RUBBER SHEET, DRY CLOTH, WOOD, PLASTIC ROPE TO REMOVE THE VICTIM.

FOR HIGH VOLTAGE EXCEEDING 1000V, NO ATTEMPT TO BE PUT TO REMOVE THE VICTIM WITHOUT SWITCHING OFF THE SUPPLY.

## WORK PLACE INJURY

Q1 WHEN THE ACCIDENT OCCURS AND A PERSON IS INJURED, IT IS MOST IMPORTANT TO ENSURE THAT \_\_\_\_\_

NO FURTHER INJURY OCCURS TO THE VICTIMS.

Q2 THE A B C OF FIRST AID REPRESENTS AIR WAY, BREATHING, CONSCIOUS.

Q3 THE OCCUPATIONAL HEALTH AND SAFETY REGULATION STATES THE REQUIREMENT FOR THE PROVISION OF FIRST AID IN THE WORK PLACE, INCLUDING \_\_\_\_\_

FIRST AID FACILITY

FIRST AID EQUIPMENT, PERSONNEL

REGISTER OF INJURY & TREATMENT.



Q4 DRABC IS AN ABBREVIATION OF THE PRIORITIES FOR A FIRST AID ACTION PLAN. COMPLETE THE WORDS BELOW

DANGER

RESPONSE

AIRWAY

BREATHING

CIRCULATION / COMPRESSION / CONSCIOUS.

Q5 IF YOU ARE ALONE AND YOU HAVE TO GIVE THE FIRST AID, WHAT SHOULD YOU DO ABOUT TELEPHONING FOR HELP?

STABILISE THE VICTIM AND THEN TELEPHONE

Q6 YOU WOULD ASSUME THAT A VICTIM IS IN CARDIAL ARREST IF —

THERE IS NO PULSE.

Fool

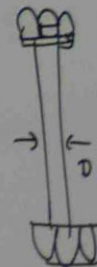
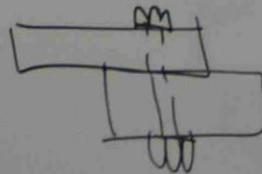
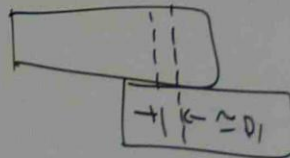
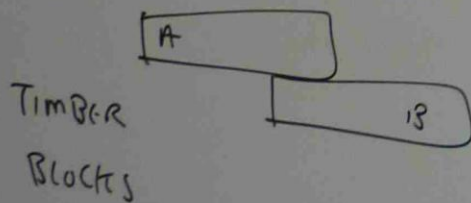
USE NEEEOOZB DISMANTLE, ASSEMBLE AND FABRICATE ELECTRO-TECHNOLOGY EQUIPMENTS  
USE NEEEOO5B FIX AND SECURE EQUIPMENTS

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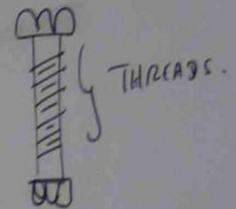
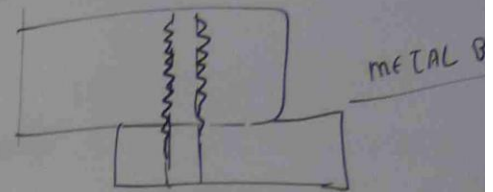
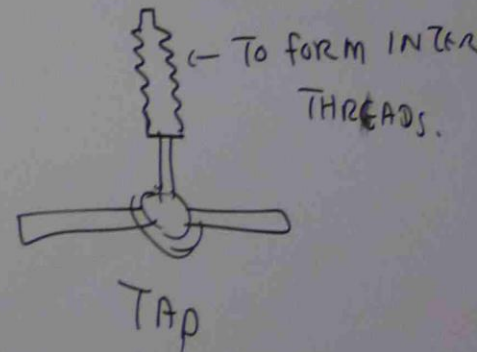
### PURPOSE OF FIXING

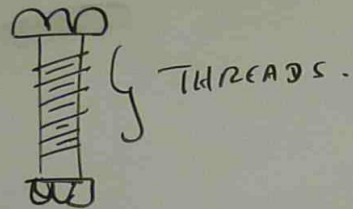
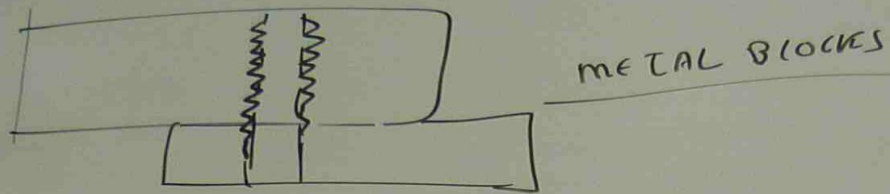
FIXINGS ARE NECESSARY TO HOLD THE PARTS OF A JOINT TOGETHER. THEY USUALLY HAVE TO BE STRONG ENOUGH TO CARRY THE WEIGHT OF THE SUBSIDIARY COMPONENT TOGETHER WITH ANY LOAD THAT IT MIGHT HAVE TO CARRY.

### FIXING BY USING DRILL, BOLT, SCREW

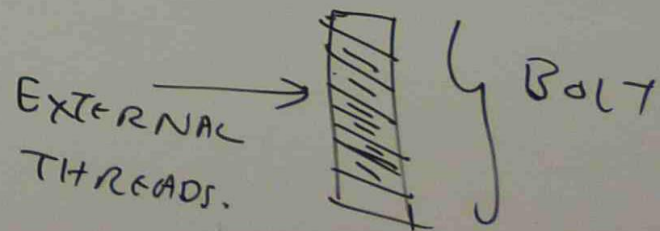
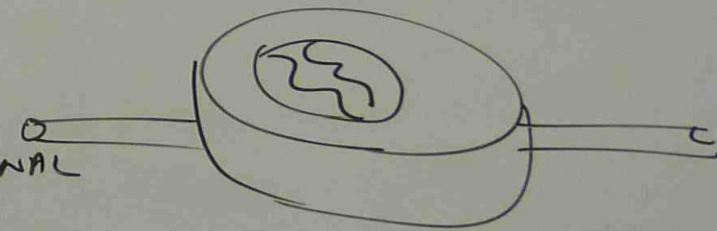
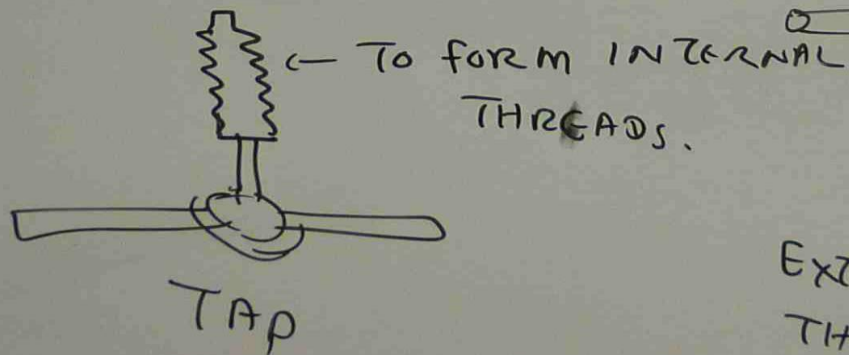


### TAP & DIE





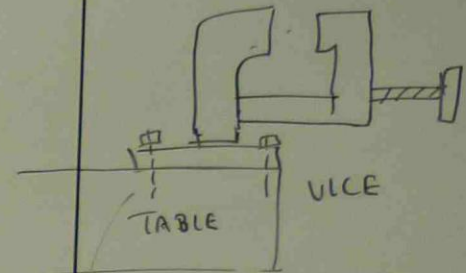
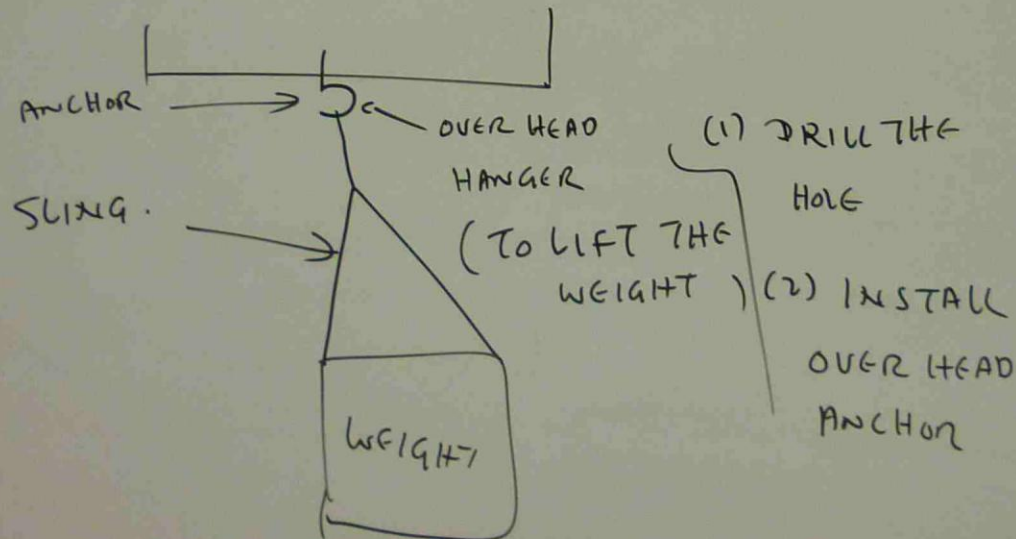
TAP & DIE





## PROCEDURE FOR DRILLING & FIXING BOLT & NUT

1. DRILL A HOLE OF THE RECOMMENDED DEPTH AND DIAMETER
2. FOR METAL PART ASSEMBLY, USE TAP TO FORM THE INTERNAL THREADS
3. USE APPROPRIATE DIAMETER BOLT . INSERT AND TIGHTENED WITH NUT.



- DRILLING
- FIXING THE VICE ON THE TABLE
- USE THE VICE & HAMMER TO FORM THE METALLIC SHEET.

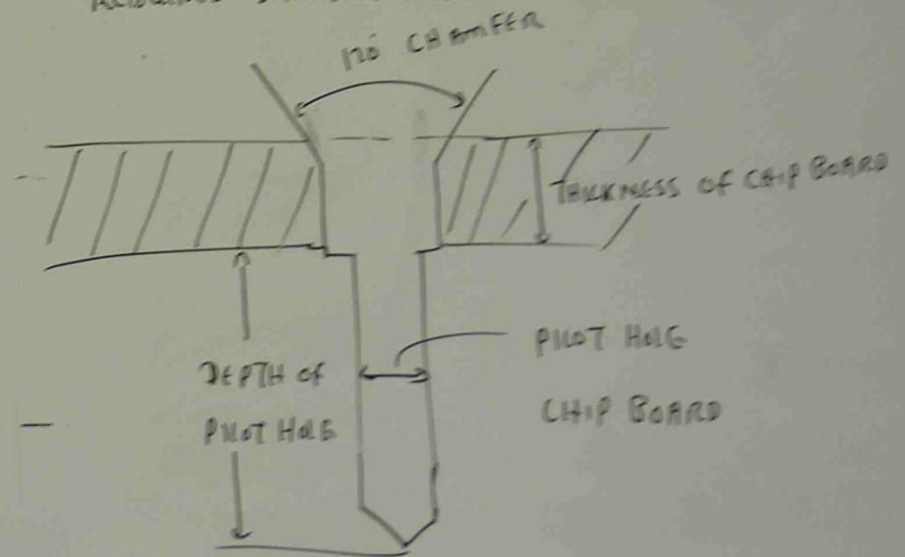
## LIST OF EQUIPMENTS AND TOOLS FOR MECHANICAL FITTING

HAMMER  
TAP  
DIE  
VICE  
HACK SAW, CUTTER  
FILE  
CHISEL  
DRILL (HAND / MACHINE)  
SCREW + DRILL BIT  
BOLT  
NUT  
RULER

SCRIBER  
DEPTH GAUGE  
MICROMETER  
CLIPPER  
VARNER CLIPPER

## DRILLING A LARGE HOLE

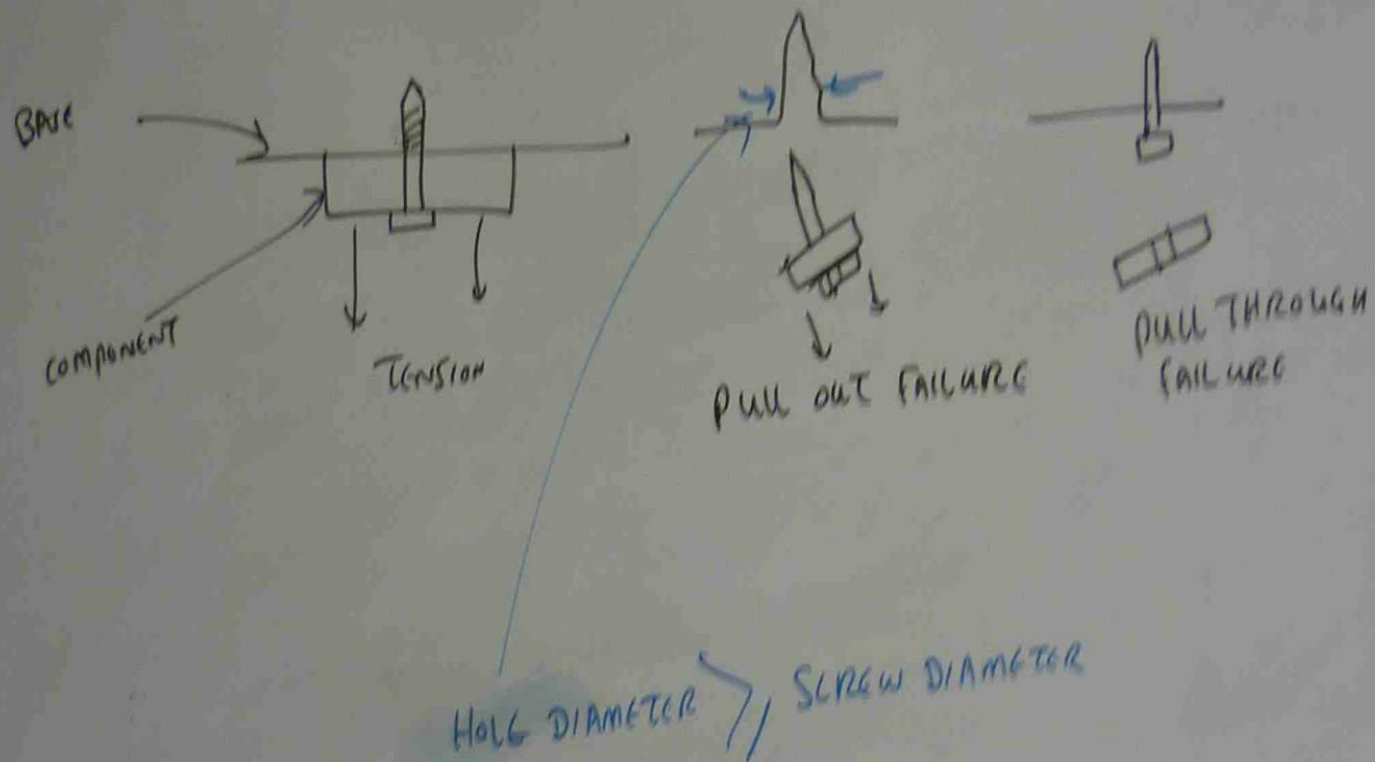
- MARKING CENTRE
- DRILL A PILOT HOLE
- CHECK
- THEN USE THE REQUIRED DRILL BIT TO DRILL THE REQUIRED DIAMETER HOLE.





- DRILL A PILOT HOLE THROUGH THE COMPONENT AND IN TO THE BASE.  
THIS IS REQUIRED FOR ALL BUT THE SMALLEST GAUGES OF SCREW.  
IN HARDWOOD AND DENSE CHIP BOARD, THE DIAMETER OF THE PILOT HOLE SHOULD BE 90% OF THE SCREW DIAMETER.  
IN SOFTWOODS AND LOW DENSITY CHIP BOARD, 70% OF SCREW DIAMETER
- THE PILOT HOLE SHOULD BE SHORTER THAN THE PENETRATION DEPTH OF SCREW FROM 3mm.
- INSERT THE SCREW INTO THE PILOT HOLE IN COMPONENT AND DRIVE IN TO THE BASE.

# FAILURE OF SCREW ASSEMBLY



## ECOT SCALED DRAWING

RECOMMENDED SCALES  
AS 1100

ENLARGEMENT	FULL SIZE	REDUCTION		
		1:2	1:5	1:10
10:1	1:1			
5:1		1:20	1:50	1:100
2:1		1:200	1:500	1:1000
		1:2000	1:5000	1:10,000

SCALE

DRAWING SIZE

1:2

1mm = 2mm

1:5

1mm = 5mm

1:10

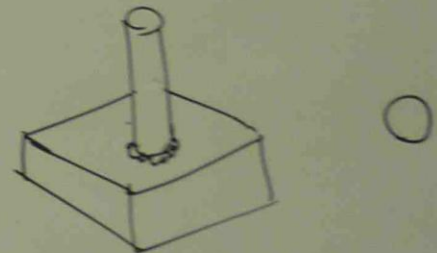
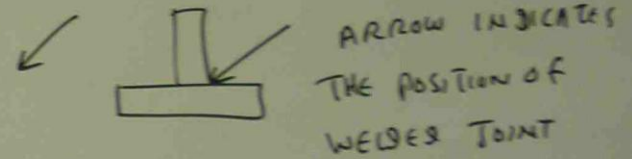
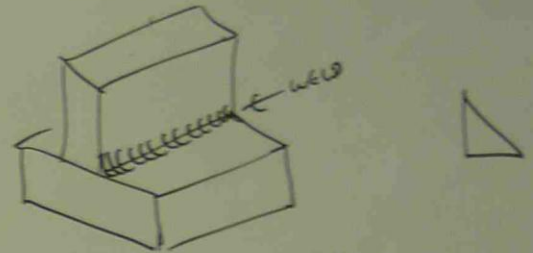
1mm = 10mm



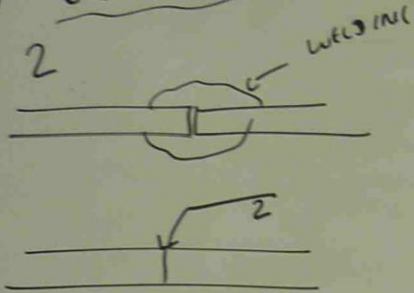
# USE OF APPROPRIATE SCALE IN APPROPRIATE PLACE

OBJECT	DRAWING SCALE
SWITCH MECHANISM	1:5
SITE PLAN OF A DOMESTIC INSTALLATION	1:50
6mm SCREW THREAD	10:1
HOUSE PLAN	1:100
DOMESTIC SWITCH BOARD	1:10
10 A SOCKET OUTLET	1:2

## WELDING SYMBOL

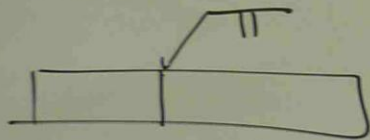


BUTT WELD

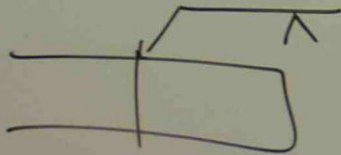


SQUARE BUTT

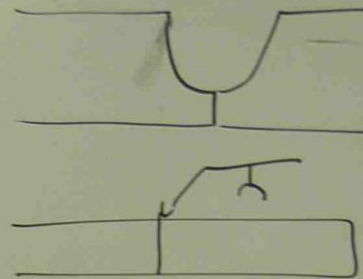
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SINGLE V BUTT

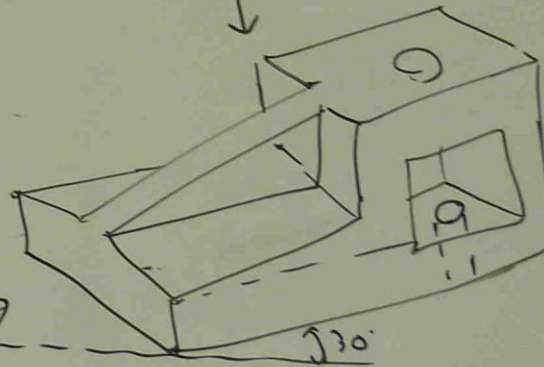


V



Y

TOP / PLAN



SIDE

ISOMETRIC DRAWING

ELEVATION  
(FRONT)

