MOVINGschools 001
HOW TO BUILD... TAKE DOWN... + REBUILD
(Assembly instructions for 1 module)
Instructions are based on one small classroom module.
If you need to cut and drill new steel pieces please see annex 1.
SITE PREPARATION

1. CHECK SITE FOR TREES
Keep trees that will help shield wind and sun
Avoid large ones that will interfere with foundations and ground swell. Don’t unnecessarily fell trees

2. CHECK AXIS OF PLANNED BUILDING FOOTPRINT
Orientate West to East to reduce solar gain

1. LEVEL SITE
2. CREATE DRAINAGE CHANNEL (IF NEEDED)

Partially fill clear tube with water
FOUNDATION POINTS

1. USE PYTHAGOREAN THEOREM

\[ c^2 = a^2 + b^2 \]

\[ c = \sqrt{3^2 + 4.88^2} \]

\[ b = 4.88 \text{ m} \]

\[ a = 3 \text{ m} \]

\[ c = 5.66 \text{ m} \]

\[ 4.88 \text{ m} \]

\[ 3 \text{ m} \]
1. COMPACT 0.2m³ OF SAND IN BOTTOM OF HOLE
2. COMPACT 0.2m³ OF GRAVEL ABOVE SAND
1. Place foundation posts into first tyres
2. Fill with gravel to top of first tyre and compact to fill in air pockets
3. Place second + third tyres into holes
4. Use level to ensure post is straight
5. Fill hole with gravel to ground level

4 X FP

Foundation foot detail

Foundation footings
1. **Foundation Footings**

1. Repeat 3 times

1. Ensure holes are facing upwards when in final upright position.

1. **Primary Frames**

1. Ensure holes are facing upwards when in final upright position.

2. Insert bolts x 8

3. Ensure holes are on end closest to longer column

4. Repeat for 2 frames

For 2 frames:

- 2 x MC
- 2 x SC
- 4 x GB
- 4 x CB
**FOUNDATION FOOTING BOLT PLACEMENT**

1. MARK WATER LEVEL
2. PLACE X AT CENTRE AND DRILL HOLE
3. INSERT BOLT
4. REPEAT 4 TIMES

**PRIMARY FRAMES ON FOUNDATION FOOTINGS**

1. SITS ON SINGLE BOLT
2. REPEAT FOR 2 FRAMES

2 x ASSEMBLED PRIMARY FRAMES
SECONDARY BOLTS ON PRIMARY FRAMES

1. DRILL THROUGH GUIDE HOLES USING LEVEL TO MAKE SURE UPRIGHT
2. BOLT COLUMN TO POST
3. REPEAT 4 TIMES

TWO FLOOR JOISTS

1. 1 BOLT x 2 ENDS OF JOIST
2. REPEAT FOR 2 JOISTS
CROSS-BRACING FOR LATERAL STABILITY

1. USE HAMMER TO FLATTEN ENDS AND MIDDLE OF BOTH CrB’s
2. DRILL HOLES 50mm FROM EACH END AND IN THE MIDDLE

REMAINING FLOOR JOISTS

1. USE ONE M8 BOLT AT EACH END OF THE JOIST
2. ENSURE JOISTS FACE EACH OTHER (III)
3. REPEAT FOR 12 JOISTS
**TWO CEILING JOISTS AND LATERAL CEILING BRACE**

1. **USE ONE M8 BOLT AT EACH END OF THE JOIST**
2. **REPEAT FOR 2 JOISTS**
3. **SECURE RP PLATES TO MC AND CB USING 4 M8 BOLTS AT EACH END**

**SHORT ROOF SUPPORTS**

1. **SECURE SRS TO MC USING 2X M12 BOLTS**
2. **SECURE SRS TO CB USING 1X M12 BOLT**
3. **REPEAT FOR EACH SRS**
SHORT ROOF INSTALLATION

1. SECURE ASSEMBLED SHORT ROOF TO SRS’S USING ONE M8 BOLT AT EACH END
2. REPEAT FOR EACH SIDE
3. SCREW IN REMAINING SIX MIDDLE BOLTS (THREE ON EACH SIDE)

SHORT ROOF ASSEMBLY

1. SECURE ASSEMBLED SHORT ROOF TO SRS’S USING ONE M8 BOLT AT EACH END
2. REPEAT FOR EACH SIDE
3. SCREW IN REMAINING SIX MIDDLE BOLTS (THREE ON EACH SIDE)

RUBBER GASKET
PVC SHEET (MEHLER TECHNOLOGY)
ALUMINIUM GRIPPING STRIPS (PROFIL TENSION SYSTEMS)
SHORT ROOF FRAME (SRF)

RUBBER GASKET
PVC SHEET
ALUMINIUM GRIPPING STRIPS
1 x SRF

1. HAMMER IN RUBBER GASKET TO KEEP SHEET IN PLACE
2. PLACE PVC SHEET ON TOP WITH 100mm OVERLAP
3. SCREW ALUMINIUM STRIPS EVERY 500mm

TIP: USE SELF-TAPPING STEEL SCREWS, NOT ZINC-COATED, TO NOT EFFECT ALUMINIUM STRIP

III
II
I

1 x ASSEMBLED SHORT ROOF
REMAINING CEILING JOISTS

1. USE ONE M8 BOLT AT EACH END OF THE JOIST
2. ENSURE JOISTS FACE EACH OTHER (I)
3. REPEAT FOR 4 JOISTS

LARGE ROOF FRAME ASSEMBLY

1. SECURE RP PLATES AT EACH END TO BOTH RB'S
ENSURE TWO END FRAME RP'S ARE SECURED AT TOP EDGE OF THE RB'S (I)
2. REPEAT FOR TWO MIDDLE RP'S
ENSURE TWO END FRAME RP'S ARE SECURED AT TOP EDGE OF THE RB'S (II) AND FACE EACH OTHER
LARGE ROOF ASSEMBLY

1. Hammer in rubber gasket to keep sheet in place
2. Place PVC sheet on top with 100mm overlap
3. Screw aluminium strips every 500mm

TIP: Use self-tapping steel screws, not zinc-coated, to not affect aluminium strip

LARGE ROOF ASSEMBLY - TENSION RODS

1. Bend ends of two C/B’s downwards
2. Drill two holes on top and bottom of middle 2 RP’s
3. Push metal rods up and under PVC sheet
4. Hammer rods through holes
5. Repeat for 4 holes
1. Slide roof frame from ground up through main columns and into place with one person on each column and two pushing from ground level.

1 x FULLY ASSEMBLED ROOF FRAME

1 BAY = 6.5 SHEETS
1. SCREW DOWN TIMBER RUNNERS ALONG PERIMETER CONNECTING ALL COLUMNS

CREATE WALLS AND DOORS

I. CREATE FRAME MORTICE AND TENON JOINTS + ASSEMBLE

II. PIN BAMBOO TO FRAME

III. SPLIT BAMBOO

SPLIT

CLEAN

ROTATE

4 x 20mm x 10mm TIMBERS
INSTALLATION OF WALLS AND BLINDS

1. INFILL SIDE WALLS AND BLINDS AS DESIRED

INFILL OF GABLE ENDS

1. USE RIGID MOSQUITO MESH OR STRIPS OF BAMBOO TO INFILL GABLE ENDS
Annex 1: For repair or replacement or additional steel members please find cutting sheets for steel frame. (All measurements in mm’s and drawings are not to scale.)
For any additional information do not hesitate to contact us; info@buildingtrustinternational.org

Thanks

Building Trust international.