

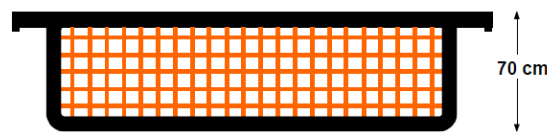
How to Build Obstacles

OBSTACLES

Dimensions: Obstacles used in pool events shall be 70 cm (\pm 1 cm) high and at least one lane wide with no dangerous parts.

Inner frame: The inner frame shall consist of a net or other element which does not permit passage by a swimmer, and of a colour which contrasts with the water.

Upper line: The upper line of the obstacle is placed on the water level and shall be clearly visible. Use of an additional floating line across the upper line of the obstacles is recommended.



HOW TO BUILD AN OBSTACLE (For guidance only)

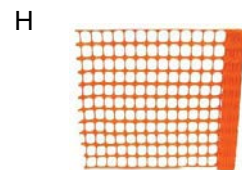
When building your own obstacles it is essential that the ILS specifications (above) are adhered to.



Material list

For one obstacle (available from DIY stores)

- A. 8 x 21.5mm PVC OverFlow Pipe – 45 cm each (horizontal pieces)
- B. 5 x 21.5mm PVC OverFlow Pipe – 65 cm each (vertical pieces)
- C. 8 x 21.5mm PVC Overflow Equal Tee
- D. 4 x 21.5mm PVC 90 Deg Overflow Bend
- E. 1 x can of PVC cement with applicator (glue to hold the pipes together)
- F. 1 x 183 cm (6 feet) copper pipe
- G. 14 Cable Ties
- H. 1 x Mesh or fencing mesh 200 cm x 70 cm (available from builders yards or online)



Equipment

- 1 x Rubber mallet
- 1 x Pipe cutter
- 1 x Drill



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ASSEMBLY INSTRUCTIONS

1. Cut PVC pipe into desired lengths (above).
2. Cut copper pipe 183 cm (6 feet).
3. Drill three holes (each ¼" diameter) through each of the 45 cm pieces of PVC: hole one at 22.5 cm from the end; holes two & three at 12.5 cm from each end.



4. Drill two holes (each ¼" diameter) through the copper pieces, each 16 cm from the midpoint.



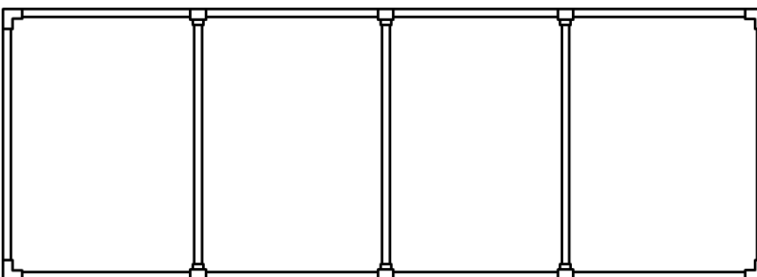
5. Assemble the top bar of the obstacle:
 - lay all pieces on a flat or level surface
 - connect four 45 cm lengths with three PVC Tees
 - place one PVC 90 degree elbow on each end
 - ensure all pieces are aligned and level



6. Assemble the bottom bar of the obstacle:
 - lay all pieces on a flat or level surface
 - connect four 45 cm lengths with three PVC Tees
 - insert copper pipe through the PVC pieces
 - fasten one 90-degree elbow on each end
 - ensure all pieces are aligned and level



7. Connect the top bar to the bottom bar by fastening five lengths of PVC – 65 cm – to the PVC Tees and bottom elbows.



8. Attach mesh to the obstacle frame using cable ties.

