Plastic Pipe Assembly

This is a basic inserting task.

Materials

30 PVC couplings
60 PVC tubes
2 blue single-compartment bins
1 jig (shown on reverse side)
1 red storage bin

Setup

Place the blue single-compartment bins containing the couplings and tubes on the left. Place the red storage bin on the right.

Procedure

• Simultaneously take one coupling with the left hand and one tube with the right hand.
• Insert the tube into one end of the coupling. Do not force.
• Place the completed unit in the storage bin. No arrangement is necessary.

Variations

Three-object assembly: 2 tubes and 1 coupling per unit – 30 units per task.

• Simultaneously take one coupling with the left hand and 2 tubes with the right hand.
• While palming one tube, insert the other tube into one end of the coupling.
• Rotate the unit in the left hand and insert the second tube into the other end of the coupling.
• Place the assembled unit in the storage bin. No arrangement is necessary.

Five-object assembly: 3 tubes and 2 couplings per unit – 15 units per task.

• Complete the first 3 steps of the 3-object task above.
• Continuing to hold the unit in the left hand, take one coupling with the right hand.
• Attach the coupling to the tube.
• Take another tube with the right hand and insert it into the open end of the coupling.
• Place the assembled unit in the storage bin. No arrangement is necessary.

Quality Criteria

Each assembled unit must include one coupling and one tube. The completed units must be in the storage bin. The objects should not easily separate in storage.
Plastic Pipe Disassembly

**Setup**

Arrange the materials as in the assembly task.

**Procedure**

- Take one assembled unit from the storage bin.
- Separate the objects from the unit, one at a time. Place the objects in their appropriate bin compartments.
- Repeat all the previous steps for the remaining units.

**Note**

Disassembly of the 3-object and 5-object tasks requires the worker to rotate the unit.

**Quality Criteria**

Each unit must be completely disassembled. All objects must be in the appropriate compartments.

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**Norms:**

**Standard Task**
- Per unit – 2.8 seconds
- Per task (30 units) – 1 minute, 25 seconds

**3-Object Task**
- Per unit – 3.3 seconds
- Per task (30 units) – 1 minute, 40 seconds

**5-Object Task**
- Per unit – 6.5 seconds
- Per task (15 units) – 1 minute, 40 seconds

A jig is provided for workers who may need additional support to complete the tasks.