

Plastic Pipe Assembly

This is a basic inserting task.



Materials

- 30 PVC couplings (A)
- 60 PVC tubes (B)
- 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.

Norms: Standard Task

Per unit – 3 seconds
Per task (30 units) –
1 minute, 40 seconds

Norms: 3-Object Task

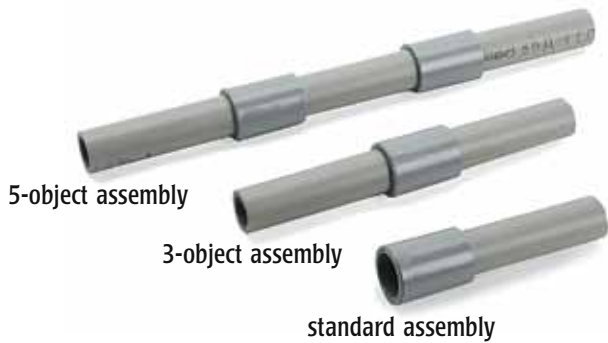
Per unit – 4 seconds
Per task (30 units) –
1 minute, 50 seconds

Norms: 5-Object Task

Per unit – 7 seconds
Per task (15 units) –
1 minute, 45 seconds

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.



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

Plastic Pipe Disassembly

Norms:
Standard Task

Per unit – 2.8 seconds
Per task (30 units) –
1 minute, 25 seconds

Norms:
3-Object Task

Per unit – 3.3 seconds
Per task (30 units) –
1 minute, 40 seconds

Norms:
5-Object Task

Per unit – 6.5 seconds
Per task (15 units) –
1 minute, 40 seconds

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.