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1-Spindle X-Y Assembly System with Pin-Pressing and Screw-Feeding

This month's machine was manufactured by DEPRAG for the US manufacturer, EcoWater Systems, which manufactures residential and commercial water treatment systems. EcoWater Systems is a member of The Marmon Group, an international association of more than 100 autonomous manufacturing and service companies. The group is ranked number 19 on *Forbes'* list of the largest privately held companies in the United States. The group emphasizes member autonomy, lean management and investment in technology and includes several other companies in the water industry.



Ever since EcoWater Systems was launched in 1925, it has had a clear vision: To provide people with water that's clearer and cleaner than they have ever experienced!



Large Part

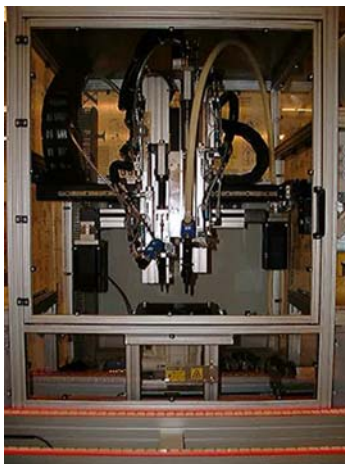
Combining the quality requirements of ECOWATER with DEPRAG's machine capability, this machine was successfully designed, manufactured and integrated. The machine's main objective is to insert screws and a pin into a plastic water treatment valve. The part fixture was designed to accept both types of products. A press-cylinder was integrated to preload a gasket; the machine also has a Transept conveyor integrated.



Part Fixture



Small Part



X-Y Screwdriving Unit

Cycle Description:

1. Operator loads part into fixture/pallet and releases pallet
2. The conveyor moves the pallet into the screwdriving unit, recognizes whether small or large part is present and automatically selects the appropriate hole-pattern
3. The press-cylinder engages the part from the bottom and preloads a gasket
4. The X-Y Screwdriving system moves into position
5. The Screwdriver Spindle moves down to position screw near the screw location
6. The feeder will load and the spindles will drive all required screws (either five or eight) and then retracts
7. The roll-pin press unit is positioned over the appropriate boss
8. The roll pin is pressed to an appropriate height
9. Operator Interface displays a GOOD or BAD part
10. The Lift Cylinder releases the completed part and moves it to an unload position