



# U.S. NAVY ENERGY, ENVIRONMENT & CLIMATE CHANGE

Environment



## Plastics Waste Processor (Mod 1)

### Function

The U.S. Navy's Plastics Waste Processors (PWP) compress and melt shipboard-generated plastic waste into dense, sanitary disks suitable for long-term storage. This waste stream includes lightly food-contaminated as well as clean plastic. The Plastics Waste Processor is designed to handle other materials that may be combined with, or contain, plastic components that cannot be processed in the normal solid waste stream. Food-contaminated disks are heat-sealed in odor barrier bags. Plastic waste disks generated by the processors are offloaded for proper disposal ashore.

### Reliability/Time Savings

The Mod 1 PWP operate three times faster and have 35% fewer parts than older versions, allowing increased reliability.

### Environmental Advantages

The volume of uncompressed plastic trash on a U.S. Navy vessel would present significant storage issues at sea. PWP technology enables Navy ships to operate without discharging plastics in the ocean, thereby avoiding possible impacts on marine life and facilitating compliance with domestic law.

### Environmental Compliance

The International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) prohibits the discharge of plastic waste but does not apply to public vessels. The Act to Prevent Pollution from Ships brought U.S. public vessels in alignment with MARPOL. The National Defense Authorization Act of Fiscal Year 1994 specifically directed the Navy to install plastic waste processors aboard the surface fleet.

### Interesting Facts

- The PWP Mod 1 can process a 20-30 pound disk every 32 minutes.
- Completed plastic disks result in a plastic volume reduction of 30 to 1.
- A computer-operated message display directs the operator through equipment operation and helps troubleshoot problems.
- No sea state or climatic condition limitations for system usage.
- Spray nozzles are self-cleaning.
- System designed and tested for shock, vibration, electromagnetic interference, airborne and structure-borne noise, magnetic compatibility.
- All components modular (easier to replace).
- PWP can operate at sea or in port.



### For More Information

Chief of Naval Operations  
Energy & Environmental Readiness  
Division (CNO N45)  
2000 Navy Pentagon, Room 2E258  
Washington, DC 20350-2000  
Kenneth Hess  
703-695-5077  
[kenneth.hess@navy.mil](mailto:kenneth.hess@navy.mil)