

# Torch Service Center



## **Torch Service Center - Makes your robot welding more effective, accurate and extends the life of your consumables**

Wolf Robotics introduces a new compact welding torch maintenance center that will ensure continuous, reliable operation of your robotic arc welding system. It provides a complete torch service station for your arc welding torch. Included in the Torch Service Center is:

- Welding Torch Reamer
- Anti-Spatter Spray Station
- Automatic Wire Cutter
- BullsEye Torch Calibration Unit

The Welding Torch Reamer has a clamping mechanism that securely holds the welding torch in place while providing automatic cleaning of the welding torch gas nozzle interior wall for quick removal of weld spatter.

In addition an Anti-Spatter Spray Station is provided to help prolong intervals between cleanings. The entire unit is controlled with one input and two outputs from the robot controller using simple, easy-to-read display instructions.

After removing slag with the reamer and spraying of the anti-spatter lubricant the torch next moves over to the Wire Cutter to trim the wire stick-out to its prescribed dimension before proceeding to the next weldment or conducting a calibration quick check at the BullsEye unit.

The Torch Service Center is mounted on a stand at a suitable height near the robot. The robot control system operates and supervises the cleaning operation, to make sure that it will not start until the torch is clamped in the correct position. This ensures that the torch cleaner cannot start accidentally which reduces the risk of personnel injury.

### **Benefits**

- Quick-Maximizes arc on time and minimizes down time since it can be programmed to clean automatically between welds or station interchanges. This reduces the need to manually disassemble and clear the nozzle.
- Simple-Once programmed the operator can decide how often each process needs to take place to prolong the contact tip and gas nozzle life.
- Effective-Automatically clears and retards buildup of spatter.
- Economical-Inexpensive equipment pays for itself in time savings, faster welding rates and increase productivity.
- Compact-All components are packaged in a small area and protected from the environment in a location easily accessed by the robot.
- Serviceable-Replaceable parts and service are readily available.



## Spatter is a production problem

It is impossible to avoid spatter during the weld operation. Hot particles from the arc easily adhere to any metal surface, including the torch. These spatter drops accumulate in the gas nozzle of the torch, and will eventually restrict the flow of shielding gas or create a short between the contact tip and the gas nozzle making the torch useless. Even relatively small amounts of spatter can block the wire feed, giving poor starting and low quality welds as a result. It's a fact of operation . . . spatter must be periodically cleaned from the gas nozzle.

What is a nuisance to welders becomes a potentially serious problem to a welding robot.

The higher the current used for welding the more spatter that adheres to the nozzle. That is why the cutter and the cleaning time on the TC-97 are adjustable, ensuring optimal results under all conditions, with minimum downtime.

## Mechanical configuration is important

The unit provides accurate, three point, secure clamping of the welding torch so that the pneumatically operated reamer can access the welding nozzle for optimum cleaning performance with no vibration or reaction forces transmitted to the robot. The torch is locked into the exact position every time for precise cleaning and less wear on the parts cleaned. The V-block can be matched to the specific external diameter of the gas nozzle and is available in sizes from 15 to 30 mm diameters. The reamer is offered in assorted sizes to fit the specific gas nozzle inside diameter and a bushing helps set the torch height for reaching the proper insertion depth.

The unit consist of a frame made from cast aluminum with an integral cylindrical housing for the pneumatic reamer stroke operation and manifold blocks, which operate the pneumatic valves and anti-spatter device. All fittings, valves, clamp block, initiators, etc. are protected with a cover. An anti-spatter reservoir is also provided.



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