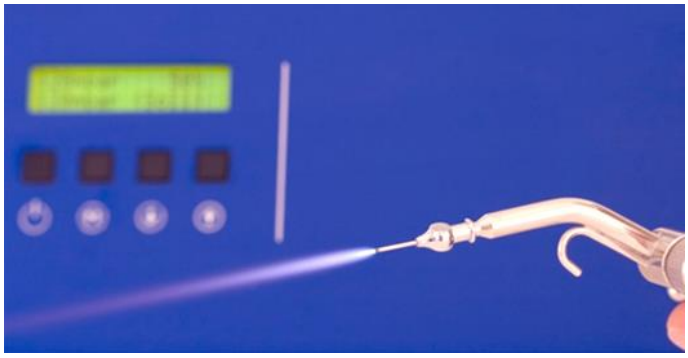
PRODUCT INFORMATION

Mig-O-Mat

Micro Flame Soldering Units

HOW IT WORKS:



MIG-O-MAT micro soldering and welding units, supplied by Techspan Group, have their own gas production. Electrolysis of distilled water produces a hydrogen/oxygen mixture which is then used to feed the micro flame. The mixing ratio is the same as in water (H2O), 2 hydrogen : 1 oxygen. The burning of the gas leaves no residues, just volatile steam.

The gas is produced by the electrochemical way of electrolysis. The electrolyte turns the distilled water conductive. The electrolyte is not used up by the electrolysis and does not have to be renewed for a long time. One only has to maintain the level of the electrolyte by adding distilled water to keep the unit functional.

The temperature and the energy of the micro flame is adaptable to a broad applications area. With up to 3000º C the micro flame melts almost every metal, glass, or other material. Welding, brazing, soldering and annealing are some of the most important applications.

A process using bottled gas usually includes the problem of how to exactly adjust the flame. Especially with copper materials a steady flame is essential. The oxy-hydrogen flame always has an absolutely constant composition. No other method comes close to the extremely low running costs. At the same time these units are almost always operational and consume very few distilled water. The Micro-flame 120 for instance would need about 0.6 liters of distilled water if used with constantly burning flame and maximum gas production. Even soldering robots do not burn for such a long period of time. And with the gas usually only being produced if necessary, the actual consumption is even lower. The distilled water can be purchased at every filling station.

The torch and its micro nozzles weighing only 100 grams and the gas tube being highly flexible both strongly support precise manual work without getting tired.

Oxy-hydrogen is produced! Are the units dangerous?
The units are manufactured according to safety regulations given by the German norm DIN 32 508, which was last revised in 2000. This norm precisely sets the necessary safety arrangements and measures for the units. Among these is the limitation of the gas production to 500 l/h. Unlike bottled gas, where the gas is stored in large amounts under high pressure and/or dissolved in solvent, this type of unit has no gas storage. Hence the amount of gas in the unit is very small and so is the potential danger. The units produce gas only when necessary. As soon as the valve at the welding torch is closed, the gas production stops.

Does the electolyte have to be exchanged regularly?
This depends on the design of the unit! Of all soldering units with own gas production according to DIN 32 508, which are known and widely used in Germany, the MIG-O-MAT soldering units have the highest electrolyte lifespan. If an exchange is necessary at all, it would only be after many years.