

# TSP2 Ti Sublimation Pump Controller

## Titanium Sublimation Pump Power Supply

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The TSP2 titanium sublimation pump power supply will control most pump cartridges with up to 4 filaments. It regulates the quantity of material sublimated from the filaments, compensating for changing conditions and eliminating the need for operator attendance or adjustment.



### FEATURES

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- Sublimation current settable over the range 30 to 55A in increments of 0.1A
- Self-timed delay between getter renewal adjustable from 1 minute to 9.9 hours
- Suitable for a wide range of cartridges with up to 4 filaments, 85% Ti, 15% Mo filaments from 1.8 to 2.1mm diameter
- Sublimation inhibit / trigger function by external switch or relay
- Filaments are warmed and cooled gently to avoid thermal shocks. The sublimation current contains minimal harmonics to reduce the risk of early filament failure due to magnetostrictive stress or mechanical resonance
- Pump current is accurately regulated in order to automatically compensate for mains variations and pump cable warming
- Filaments may be run for degassing at currents between 5 and 25A to prevent overloading the io pump. Filaments can be kept warm at the end of a system bake
- Indicates open-circuit filament, shorted cable / filament, inhibit and overtemperature
- Thermal overload protection
- No in-service adjustment is required
- 2U (88mm) high full-width, steel cased instrument for easy rack-mounting

## SPECIFICATIONS

TSP2	
Operating temperature	10 to 40°C for rated performance. Operation up to 50°C is possible at longer sublimation intervals i.e. below 10 <sup>-6</sup> mbar
Supply voltage	220 / 240V (Option H) OR 100 / 110V (Option L), 50Hz or 60Hz, to order
Power consumption	Less than 20 watts when idling, less than 700 watts when sublimating at 55A with a maximum-length cable.
Output current	Regulated at 30 to 55A RMS x 0.1A in sublimation, 5 to 25A RMS x 5A in degass.
Output voltage	The output voltage is determined by the cable and cartridge resistance. Maximum output voltage is 9.5V RMS at 45A
Timing	Sublimation period 0.1 to 3 minutes x 0.1 min.. Delay interval 1 to 59 minutes, 1 to 9.9 hours. Degas time 1 to 99 minutes. All timing is derived from mains supply frequency.
Output duty cycle	100% at 300w output power and less than 30°C ambient temperature.
Dimensions	2U high (88mm), full width (483mm) x 366mm deep.
Weight	11kg

## ORDERING INFORMATION

Order Code	
TSP2-H	Ti. Sublimation pump power supply. 220/240V
TSP2-L	Ti. Sublimation pump power supply. 100/110V
TSP2L6	6 metre non-bakeable pump lead
TSP2BL6	6 metre pump lead with 1 metre 200°C bakeable section



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