

Electroporator, TSS20 OVODYNE

A square wave pulse generator for bench top use, capable of single or multi-pulse operation at voltages suitable for *in ovo* electroporation. The use of the chick embryo as a model for gene transfer experiments has grown rapidly in recent years. The TSS20 OVODYNE is a highly-refined, microprocessor-based instrument providing flexibility and convenience in operation.

- ◆ Accurate voltage setting
- ◆ Resistance measuring facility ensures that an appropriate voltage is selected for electroporation in the presence of conductive buffers, or that electrode spacing is adjusted to avoid current limiting conditions
- ◆ Clean, square wave pulses produced
- ◆ Safe and easy-to-use
- ◆ Remote hand- or footswitch operation
- ◆ Accessory EP21 current amplifier extends the current range of the TSS20 up to 1000mA, allowing electroporation of other embryo cell types and multiple embryos *in vitro*
- ◆ Silver, tungsten, or platinum-tipped electrodes available

TSS20 Specification

Pulse voltage	V	0 to 99.9 x 0.1
Pulse type		Square wave
Programmable pulses		1 to 999 x 1
Pulse width	ms	1 to 999 x 1
Resistance		0 to 9998 x 1
Sequences		0 to 999
Overall, W x D x H	mm	230 x 200 x 85
Weight	kg	2.5
Supply requirements		230V 50/60Hz

EP21 Specification

Input (from TSS20)	V	15 to 100 at 2mA
Peak output	V	15 to 100 at 1000mA max.
Output fuse		1amp fast blow, type F
Insulation		Floating output stage, isolated to >3kV from mains and control circuit
Overall, W x D x H	mm	230 x 225 x 55
Weight	kg	2.35
Supply requirements		230V 50/60Hz

TSS20 OVODYNE

As described. Supplied without probes or probe holders which are required for operation. For 230V 50/60Hz single phase supplies.

MW900-10 TSS20

MW902-14 Accessory footswitch for TSS20

MW902-18 Accessory handswitch for TSS20

EP21 Current Amplifier

As described. Supplied without probes or probe For use only with MW900-10, allowing higher currents up to 1000mA to be passed at up to 100V whilst maintaining the square wave pulse-form. For 230V 50/60Hz single phase supplies.

MW902-40 EP21

Electrode Holders

Available singly for manual positioning, or as the Adjustatrod twin holder with screw clamp adjustment to allow precise positioning of silver "paddle" electrodes either side of the embryo region. All holders are 10cm x 6mm o.d. and supplied with 1 metre cable and plug, in colour as indicated.

MW902-54 Single holder, red

MW902-57 Single holder, black

MW902-62 Adjustatrod, twin holder with 1 each red and black

Silver Electrodes

Insulated 0.8mm diameter shaft with choice of flattened or offset exposed pole. Supplied in packs of 2.

MW902-65 Flattened pole

MW902-69 Offset pole

Tungsten Electrodes

Polyamide insulated, 0.5mm diameter shaft with 10:1 tapered tip with exposed area as indicated. Supplied in packs of 2.

MW902-72 1mm

MW902-73 2mm

MW902-74 3mm

MW902-75 4mm

MW902-76 5mm

Platinum-tipped Electrodes

Insulated shaft in choice of rigid stainless steel or semi-rigid silver, 0.8mm diameter with exposed platinum wire length of 7.5mm x 0.5mm diameter. Supplied in packs of 2.

MW902-88 Stainless steel shaft

MW902-90 Silver wire shaft



MW900-10 with MW902-40, MW902-62 and electrodes



MW902 electrodes