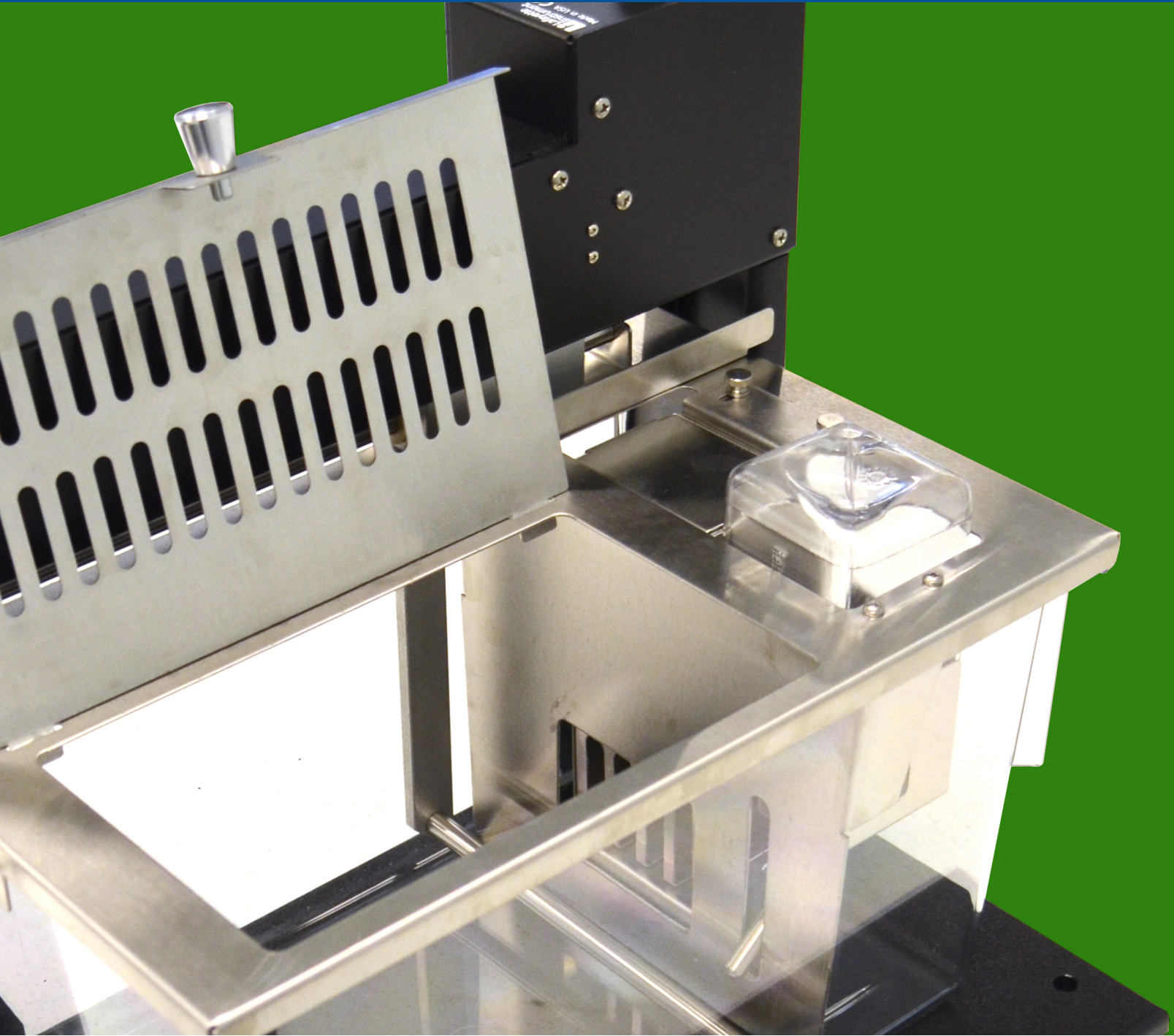


# Sleep Fragmentation

Chambers

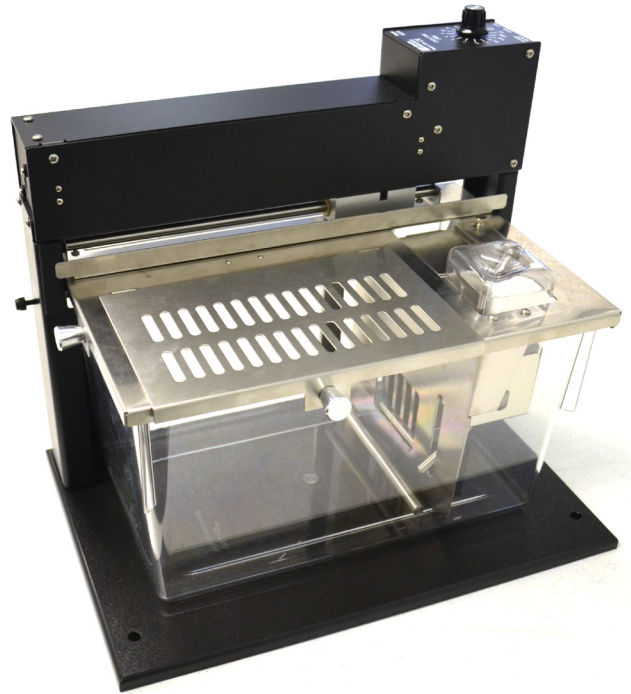


# SLEEP FRAGMENTATION

The Lafayette Instrument Company Model 80391 Sleep Fragmentation Chamber provides researchers with the necessary tools for sleep fragmentation studies in both mice and rats.

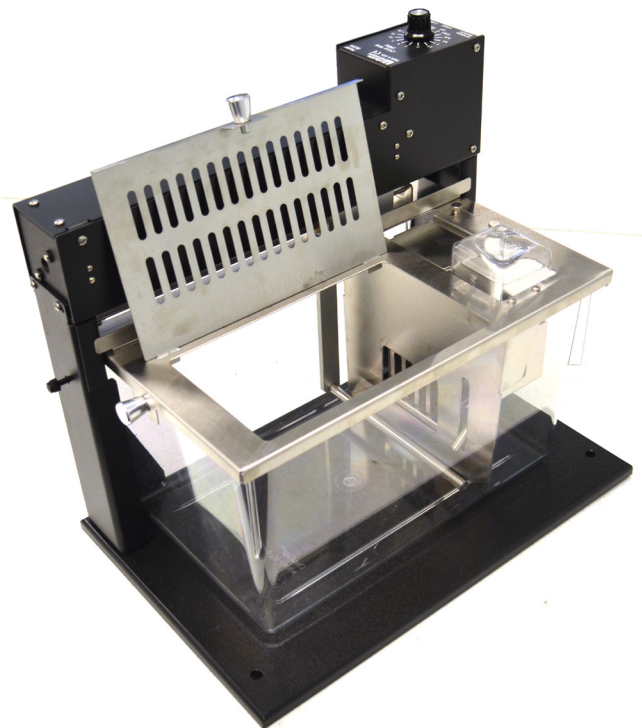
The 80391 maintains an animal environment that is virtually identical to that used in the original 80390 Chamber. The divider wall has been removed since a much faster sweep time is now possible. The sweep bar, food hopper, ad lib water and ventilated lid remain the same. The living environment is now independent of the drive mechanism making the chamber quieter and easy to clean. It resembles a standard living environment that includes food and water support. The height of the sweeper bar is adjustable to accommodate bedding.

The cycle time selector includes a variety of different cycle times. The continuous sweep setting now takes just 7.5 seconds. Selectable inter-sweep cycle values start at 0.25 minutes (15 seconds) all the way up to 30 minutes. Alternately, sweeps may be initiated from a remote device.



## FEATURES

- New slide out chamber and sweep arm for easier cleaning and animal handling
- Updated cylindrical sweep arm for
- Removable food hopper and water bottle holder
- Bump and release arm movement designed to sweep to the end of the chamber and then reverse enough to prevent animal injury
- Faster and smoother sweeps with two new cycle times of 0.35 & 0.50 minutes
- A 50 ms active low pulse is generated at the start of each sweep to event mark data acquisition systems as needed
- Tether access opening available with optional hatch lid
- Model 80391-SL Slotted Lid is available for use with tethered headstages





# SPECIFICATIONS

## Cycle Times

- Continuous: Approximately 7.5 seconds
- Selectable (min): 0.25, 0.5, 1, 1.5, 2, 3, 4, 5, 10, 15, 20, 25, 30

## External Initiate/Event Output

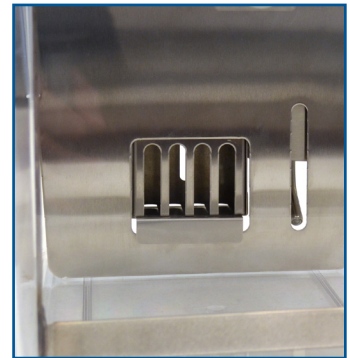
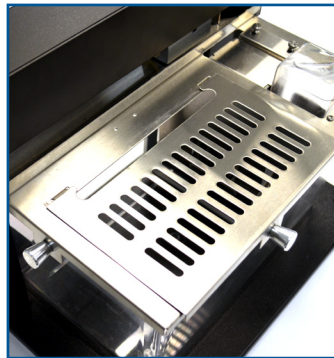
- General: 2.5mm connection, 3 conductor
- Base: Ground
- Ring: Event Out - Open collector, pull up if needed (30 VDC max)
- Tip: Ext Initiate, active low switch closure

## Dimensions

- Outside: 16.0"L x 10.5"W x 14.5" H (40.6 x 26.7 x 36.8 cm)
- Inside Living Space: 9.625"L x 8.25"W x 7.75"H (24.5 x 21.0 x 19.7 cm)
- Weight: 12 lbs (5.4 kg)

## Power Supply

- 9w VDC @ 2A center positive supply (included)



# RESEARCH

Ramesh V, Kaushal N, Gozal D. Sleep fragmentation modifies EEG delta power during slow wave sleep in socially isolated and paired mice. *Sleep Science* 2009;2:64–75.

Nair D, Zhang S X L, Ramesh V, Hakim F, Kaushal N, Wang Y, Gozal D. Sleep Fragmentation Induces Cognitive Deficits via Nicotinamide Adenine Dinucleotide Phosphate Oxidase-dependent Pathways in Mouse. *Am J Respir Crit Care Med*. 2011; 184(11): 1305-1312.

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