

## Disruptor Horns

### Description:

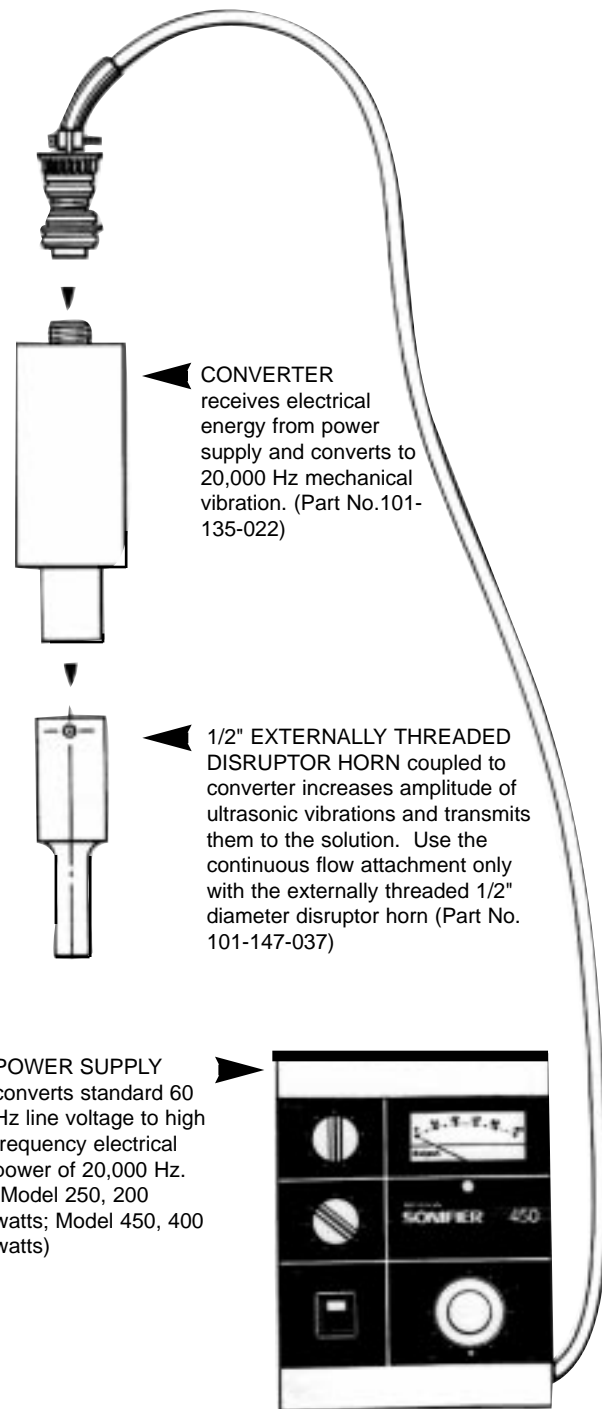
Horns (probes) transmit ultrasonic energy into a solution. The dimensions of the horn and the output control setting determine the amount of amplitude (tip movement) and degree of ultrasonic activity in the liquid. Generally, the smaller the tip diameter, the higher the amplitude. Larger tip diameters have less amplitude but can accommodate larger volumes. All Sonifier horns and tips are fabricated from titanium. Please note the charted amplitude ratings and liquid volumes when selecting horns.

A step horn with a threaded body enables the attachment of various screw-on accessories, such as a continuous flow cell. Tapped horn ends enable attachment of microtips. Tapped horns are supplied with removable flat tips.

High gain horns cannot be used with screw-on accessories but provide higher amplitude at 3/4" and 1" diameters than the same diameter step horn.

Exponential horns have lower tip amplitude but can withstand higher tip loading. Best suited for applications requiring the compressing of solids such as powders and tissue.

### Typical Application:



CONVERTER receives electrical energy from power supply and converts to 20,000 Hz mechanical vibration. (Part No.101-135-022)

1/2" EXTERNALLY THREADED DISRUPTOR HORN coupled to converter increases amplitude of ultrasonic vibrations and transmits them to the solution. Use the continuous flow attachment only with the externally threaded 1/2" diameter disruptor horn (Part No. 101-147-037)

POWER SUPPLY converts standard 60 Hz line voltage to high frequency electrical power of 20,000 Hz. (Model 250, 200 watts; Model 450, 400 watts)

#### STEP HORNS WITH THREADED BODY

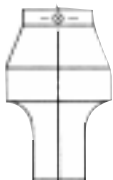
Tip Diameter	3/8" (9.5mm)	1/2" (13mm)	1/2" (13mm)	3/4" (18mm)
Tip Conf.	Solid	Tapped +	Solid	Solid
Intensity	Very High	High	High	Medium
Ampl. Range**	36-240	21-145	21-145	9.5-63
Volume (Liquid)	5-100 ml	10-250 ml	10-250 ml	25-500 ml
Part Number	101-147-039	101-147-037*	101-147-038	101-147-043

#### HIGH GAIN HORNS

Tip Diameter	3/4" (19mm)	1" (25.4mm)
Tip Conf.	Solid	Solid
Intensity	Medium	Low
Ampl. Range**	19-130	6.3-40.5
Volume (Liquid)	25-500 ml	50-1000 ml
Part Number	101-147-035	101-147-044

#### EXPONENTIAL HORNS

Tip Diameter	1/2" (13mm)	1/2" (13mm)
Tip Conf.	Tapped++	Solid
Intensity	Medium	Medium
Ampl. Range**	10-65	10-65
Volume (Liquid)	10-250 ml	10-250 ml
Part Number	101-147-040	101-147-041



\* Available with graduated depth scale on horn tip, part number 101-147-036.  
 \*\* Amplitudes quoted are total peak-to-peak movement in microns as measured on positions 1 and 10 of the output control  
 + Replaceable flat tip, 1/4-20 thread, part number 101-147-013  
 ++ Replaceable flat tip, 1/4-28 thread, part number 101-147-024