

FIVE-STAR TECH TIPS

DRUM ACOUSTICS

Contemporary drummers are fortunate to be living in an era in which the art and science of drum making continue to expand at such a rapid pace. This is most evident in the design and manufacture of the modern drumshell. Never before has such a wide variety of high-quality shells been available at so many price points.

Today, virtually all drumsets are made from plied drumshells. The number and thickness of the plies may vary, but most fall into one of three basic types:

- Thin shells have a lower pitch and a darker tone that is well-suited for traditional, acoustic applications.
- Thick shells are brighter and higher in pitch, allowing them to project better in high volume, modern playing situations.
- Reinforced shells are thin shells with reinforcing hoops at the top and bottom. This shell design offers a balance of clarity, resonance and power along with a midrange tonal spectrum that is suggested for a variety of drumming applications.

Historically, Maple and Birch have been among the most preferred drum shell materials, due to their superior tonal and acoustic characteristics. Maple is known to produce a deep, round, warm tone while Birch is a bit brighter and more focused. Other types of wood, including Beech, Mahogany

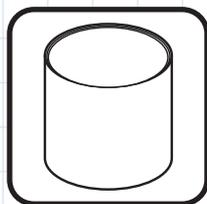
and Poplar, as well as other materials such as a metal, fiberglass and plexiglass are also used for drumshell construction. These alternate materials can modify the sound, performance and appearance of a drum.

In addition to shell type and thickness, the roundness of the shell is also a critical factor. This is because a drumshell's main function is to allow the optimum vibration of the drumheads. And, it's a simple fact that the rounder the drum is, the more head vibration it allows.

The shape, angle and location of the bearing edges, combined with their uniformity, further focus and enhance the drum's capacity to produce sound. Tom-toms often have a 60° (sharper) angle for a brighter, more sustained sound while bass and snare drums usually have a 45° (flatter) edge for a darker tone and cleaner attack. Rounder, 30° edges are an older style that is rarely used today. In fact, most modern drums have a counter-cut on the outside of the edge that reduces the contact area between the head and shell for an even fuller, more resonant sound.

Finally, even though every aspect of a drum— from hardware and finishes to heads— can contribute to the sound of the drum, it is the quality and consistency of the drumshell that facilitates the creation of the best sound, as well as the most sound.

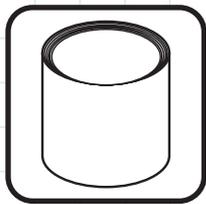
factor	thin shell	reinforced shell	thick shell
pitch/tone	low/dark	mid	high/bright
attack/decay	fat/long	mid/mid	clean/short
projection	min	mid	max
application	jazz	general	rock



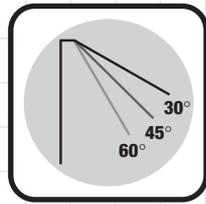
Thin Shell



Reinforced Shell



Thick Shell



Bearing Edges

To learn more about drum construction and acoustics, talk to your teacher, ask your dealer or log on to the drum-related websites listed throughout this guide.