

Saxophone Mouthpiece Technical Monograph

What each part of a saxophone mouthpiece actually does, why the numbers are quoted the way they are, and what the trade offs are between them. Written for players who want to understand what they are asking for.

DRAFT

The first six sections are written. Measurement and tolerances, and Research and findings, are still empty.

CONTENTS

- 01 Tip opening
- 02 Facing curve and facing length
- 03 Baffle
- 04 Chamber
- 05 Floor and window
- 06 Rails and table
- 07 Measurement and tolerances
- 08 Research and findings

Tip opening

The tip opening is the gap between the reed and the tip rail, measured at the tip. A bigger opening takes more air and gives you more volume to play with. A smaller one has less resistance and is easier to control for longer.

It is the number most players lead with, and it is the least useful one on its own. A given opening feels completely different depending on the facing length it is paired with, which is why I ask what you play now rather than just what number you want.

Facing curve and facing length

The facing curve is the curved section running from the break, where the flat table ends, up to the tip. It is measured as a facing length in half millimetres.

A longer facing eases resistance and helps subtone, though it goes mushy if you overdo it. A shorter facing sharpens articulation and altissimo control, and gives up some warmth down low. The curve has to be a real curve, not a series of flats, or the reed will slap rather than roll onto the rails.

Baffle

The baffle is the area just behind the tip rail on the inside, and it is what shapes how bright the piece is. A high baffle close to the tip speeds the air up immediately and gives you edge and cut. A rollover starts lower and further back, so the piece keeps its core without turning shrill when pushed.

Chamber

The chamber is the internal cavity between the floor and the bore. A bigger chamber gives you a broader, darker sound, and a smaller one is more focused. Chamber size and baffle height work against each other, and most of what separates one mouthpiece from another is where a maker chose to sit between them.

Floor and window

The floor is the surface running back from the baffle to the bore, and the window is the opening the reed vibrates over. A deeper floor puts more air volume behind the reed and adds body, at the cost of asking more of the player's throat. A wider window gives the reed more room to work.

The table is the flat surface the reed sits on, and the side rails are where the reed actually contacts and vibrates against the mouthpiece. Their profile has to match the facing curve exactly or the thing will not seal and will not respond evenly. This is where most of the work goes, and it is the first thing to check on any piece that feels wrong.

Measurement and tolerances

Not written yet. This section wants the tools used, the tolerance worked to, and why that tolerance rather than a looser one.

Research and findings

Not written yet. This is the open section. Whatever is worth writing down about what has been measured, tested and concluded across the pieces built and rebuilt here.