

CLB® Application Principles

The patented Calibrated LASIK Blade (CLB®) design allows the surgeon to offer the patient a CustomFlap™ through the use of six accurate CLB® options based on the patient's cornea shape. Each CLB® model is +/-5 microns in the critical dimension where all other LASIK blades can be +/-50 microns.

Below table of flap thickness targets that include a 100 micron head and a 130 micron head in conjunction with the six CLB® options. These flap thickness targets are based on an average cornea thickness and moderate k-reading. As a general rule, a thicker cornea will yield a thicker flap and a thinner cornea will yield a thinner flap. This is a result of tissue compression and displacement as the microkeratome head passes over the firm cornea to create the flap. Also, as a smaller impacting factor, a higher k-reading can yield a thicker flap while a lower k-reading can yield a thinner flap.

If a patient has a thick cornea (example 600 um) and a steep k-reading (example 47), the surgeon could help compensate for these patient factors by using either a Minus 20 or Minus 30 CLB® to achieve a thinner flap thickness than if a Plano CLB® were used. If a surgeon wanted to achieve optimal accuracy, they could create their own CLB® nomogram for their microkeratome based on corneal thickness and adjust it slightly for each patient based on their k-reading. An example of this could be as follows:

Corneal Thickness

<500
501-535
536-550
551-570
>571

CLB®

Plus 10
Plano
Minus 10
Minus 20
Minus 30

CustomFlap™ Options						
CustomFlap™ Thickness Options (in microns)	MINUS 30 CLB®	MINUS 20 CLB®	MINUS 10 CLB®	PLANO CLB®	PLUS 10 CLB®	PLUS 20 CLB®
R100M Head (100 Micron)	70	80	90	100	110	120
R130M Head (130 Micron)	100	110	120	130	140	150

The CLB® will greatly help the surgeon achieve a more accurate flap thickness, but we suggest the surgeon use the Plano CLB® model with the same head on approximately 30 eyes in order to establish a norm for flap thickness. After the norm is established, the surgeon can start using other CLB® models having some knowledge as to the accuracy of the head being used. It is also important that the microkeratome be in good working condition. MED-LOGICS offer a 24 hour turn around service for the M2 handpiece, which requires routine replacement of the two handpiece motors due to corrosion caused by BSS entering the handpiece. As the motors degrade from corrosion, the flaps can become less accurate.

We suggest following the microkeratome manufacturer's vacuum ring nomogram. The ML7 also allows the surgeon to adjust the vacuum level between eyes to adjust for the thinner flap that is typically experienced due to a slightly duller blade edge.

It is important to recognize the fact that only MED-LOGICS can provide the accuracy and flap thickness options described above. The CLB® and the ML7 designs are protected and covered by patents.