BAUSCH + LOMB
See better. Live better.

# GAS PERMEABLE (GP) LENS FITTING GUIDE

BAUSCH + LOMB

# Bausch & Lomb provide a complete ‘Made to Order’ service backed by personal service and technical advice.

## Our range of materials provide fitters with a complete choice to cater for almost any patient requirement

| Materials | | Information |
|---|---|---|
| BOSTON XO2 | Hyper Dk Fluorosilicone Acrylate | Outstanding oxygen permeability without compromising wettability, stability, or comfort. Excellent deposit resistance. |
| BOSTON XO | Super Dk Fluorosilicone Acrylate | High Oxygen delivery, stability equalling that of lower Dk materials. |
| QUANTUM II (ML210) | Super Dk Fluorosilicone Acrylate | High Oxygen Delivery. Good Protein resistance. |
| BOSTON EO | High Dk Fluorosilicone Acrylate | Excellent wetting/deposit resistance. |
| BOSTON EQUALENS | High Dk Fluorosilicone Acrylate | Fluorinated polymer for improved oxygen delivery. Contains UV absorber. |
| QUANTUM I (ML92) | Mid Dk Fluorosilicone Acrylate | Medium oxygen delivery. Good protein resistance. |
| BOSTON ES | Low-Mid Dk Fluorosilicone Acrylate | Exceptional durability and modulus. Exceptional wetting and deposit resistance. |

**For more information on our GP range please visit www.bauschgp.com or phone our dedicated GP specialist team on 0870 850 7921**

# Fitting Guide
# MAXIM

## Spheric GP Contact Lens Reaching New Heights of Excellence

| FEATURES | BENEFITS |
|---|---|
| ● Constant Average Thickness | All lenses, regardless of power, have the same mean thickness value. This ensures consistent centration and movement and the Dk/t is constant throughout the power range |
| ● Constant tear layer profile | Maintains a consistent fluoroscein pattern beneath the lens, regardless of K readings. Studies show high first fit success rate, making the lens easy to fit when empirical fitting. |
| ● Spherical Optic Zone | Best possible optical quality |
| ● Straight forward empirical fitting | To ensure first time success |

# Technical Information

| | |
|---|---|
| Manufacture | Lathe Cut |
| Materials | ML92, ML210<br>Boston ES, Boston Equalens, Boston EO<br>Boston XO, Boston XO2 |
| Powers | -25.00 to +25.00 (in 0.25D steps) |
| Diameters | 9.30mm & 9.80mm |
| Average Thickness | 0.19mm (all powers) |
| Base Curves (BOZR) | 7.00mm to 9.00mm (0.05mm steps) |

# Fitting Guide
# MAXIM ULTRA

## Aspheric GP Contact Lens Reaching New Heights of Excellence

| FEATURES | BENEFITS |
|---|---|
| ● Constant Average Thickness | All lenses, regardless of power, have the same mean thickness value. This ensures consistent centration and movement and the Dk/t is constant throughout the power range |
| ● Constant tear layer profile | Maintains a consistent fluoroscein pattern beneath the lens, regardless of K readings. Studies show high first fit success rate, making the lens easy to fit when empirical fitting. |
| ● Spherical Optic Zone | Best possible optical quality |
| ● Aspheric periphery | Optimum comfort, adaptation, on eye dynamics |
| ●Straight forward empirical fitting | To ensure first time success |

# Technical Information

| | |
|---|---|
| Manufacture | Lathe Cut |
| Materials | ML92, ML210<br>Boston ES, Boston Equalens, Boston EO, Boston XO, Boston XO2 |
| Powers | -25.00 to +25.00 (in 0.25D steps) |
| Diameters | 9.30mm & 9.80mm |
| Average Thickness | 0.19mm (all powers) |
| Base Curves (BOZR) | 7.00mm to 9.00mm (0.05mm steps) |

# Fitting Guide
# QUANTUM Lenses

**Unique spheric/aspheric design. Consistently smooth transition zone**
**Clear optics and good corneal alignment on a wide range of corneas**
**More accurate corneal alignment can be achieved. Even pressure and weight distribution combined with clear vision in all light levels**
**High levels of comfort and deposit resistance leads to excellent long term patient satisfaction**

- LENS K READINGS: should be measured in the usual way.
- FITTING SELECTION: The aspheric peripheral zone of Quantum produces a flatter fitting relationship on the cornea than found with other rigid lens designs. This means that the optimally fitting lens is frequently 0.05mm to 0.10mm steeper than the flattest corneal curve.
- The lens should demonstrate minimal apical clearance or alignment to the flatter meridian of the eye .
- FLUORESCEIN PATTERN: Although initially specifying a lens with a relatively steep Back Optic Zone Radius (BOZR), the fluorescein pattern will show an alignment fit for optimal lens performance.
- PERIPHERAL FIT: Peripheral clearance should encroach up to 1mm in from the edge of the lens in the flatter meridian but may be more in the steeper meridian in toric eyes.
  The lens should move adequately on blinks and eye movement but should not cross the limbus on extreme gaze. Adequate peripheral clearance should be maintained in all directions of gaze
- OVERALL SIZE: Select the 9.60mm diameter as the first choice, but ensure 1-1.5mm less than HVID

### GENERAL GUIDANCE

Poor centration may be improved with a larger diameter of 10.20

BOZR can be increased to flatten the central fit or decreased to steeper the central fit

# Technical Information

| | |
|---|---|
| Manufacture | Aspheric/Lathe Cut |
| Materials | Quantum 1, Quantum 2, Boston XO2 |
| Powers | -25.00 to +25.00 (in 0.25D steps) |
| Diameters | 9.00mm & 9.60mm & 10.20mm |
| Base Curves (BOZR) | 7.00mm to 8.80mm (0.05mm steps) |

# Fitting Guide
# MULTICURVE Lenses

**Conventional multicurve fitting is based on apical alignment with gradually increasing peripheral clearance.**

- LENS K READINGS: should be measured in the usual way.
- SPHERICAL CORNEA: select initial lens on flattest K and assess fluorescein pattern and amend as necessary to provide minimal apical clearance.
- GP LENSES: to avoid flexure of GP materials on toric corneas it may be necessary to fit these lenses aligned to the flattest meridian. Consider full back toric if difference in K is greater than 0.3
- BCOD: should be large enough to cover the pupil in a good range of light levels.
- OVERALL SIZE: should be large enough for stability without overriding the limbus on extreme eye movements.
- PERIPHERAL CURVES: should be amended to change edge lift as required, depending on peripheral lens fit.

### GENERAL GUIDANCE

(i) For each increase in BCOD of 0.50mm increase BCOR by 0.05mm.
(ii) When steeping fit by 0.05mm change power by -0.25

There should be minimal apical clearance with edge clearance just evident in the mid-periphery increasing to the edge of the lens

# Technical Information

| | |
|---|---|
| Manufacture | Lathe Cut |
| Materials | ML92, ML210<br>Boston ES, Boston Equalens, Boston EO<br>Boston XO |

# Fitting Guide
# ZL9 Lens Design

**The fitting of ZL9 lenses does not depart significantly from conventional multicurve fitting The aim is a well centred lens with minimal apical clearance and adequate peripheral clearance.**

**The first lens is usually selected to be 0.05mm steeper than flattest K Reading and the fluorescein pattern assessed.**

- LENS K READINGS: should be measured in the usual way.
- SELECTION: first lens should be 0.05mm steeper than flatter K-reading. Assess fluorescein pattern and amend as necessary to provide minimal apical clearance.
- GP LENSES: to avoid flexure of GP materials on toric corneas it may be necessary to fit these lenses aligned to the flattest meridian. Consider fill back toric if difference in K is greater than 0.3
- BCOD: should be large enough to cover the pupil in a good range of light levels.
- OVERALL SIZE: should be large enough for stability without overriding the limbus on extreme eye movements.
- PERIPHERAL FIT: While the rate of flattening is standardised more or less edge clearance can be achieved by requesting the rate of flattening from a lens with a different BCOR (designated Z the flattening factor)
    - Eg BCOR 7.90 with 8.00 Z will give the peripheral curves of a lens of BCOR 8.00 i.e. more edge clearance
    - Eg BCOR 7.90 with 7.70 Z will give less edge clearance than std

GENERAL GUIDANCE

(i) For each increase in BCOD of 0.50mm increase BCOR by 0.05mm.
(ii) When steeping fit by 0.05mm change power by -0.25

There should be minimal apical clearance with edge clearance just evident in the mid-periphery increasing to the edge of the lens

# Technical Information

| | |
|---|---|
| Manufacture | Lathe Cut |
| Materials | ML92, ML210<br>Boston ES, Boston Equalens, Boston EO, Boston XO |

# Fitting Guide
# KERATACONUS Lens Design

**A kerataconus lens is used on a misshapen cornea, usually having a very steep central radius. The BCOR of the lens is steep and the back optic diameter is also smaller than standard.**

- LENS K READINGS: should be measured in the usual way.
- SELECTION: After taking K Readings select initial lens BCOR to be one third of the difference between K's steeper than flattest.

  EG: K'S 7.00x6.40 = Initial lens 6.80
- Flourescein pattern should a 'bulls eye' pattern e.g slight central touch, then clearance, touch, then peripheral clearance.
- Assess fit and over refraction and refine as necessary. Peripheries can be modified to give greater or lesser edge clearance

GENERAL GUIDANCE

(i) The steeper the BCOR the greater the edge clearance.
(ii) All peripheral curves and diameters can be amended as required.

# Technical Information

| | |
|---|---|
| Manufacture | Lathe Cut |
| Materials | ML92, ML210<br>Boston ES, Boston Equalens, Boston EO, Boston XO |

**FITTING SETS ARE AVAILABLE ON REQUEST**

# Fitting Guide
# MAXIM TORIC Lenses

**The toric back surface made to match the patient's exact corneal geometry means the first lens fits well, giving excellent vision with good comfort. The fitting of toric lenses can be achieved from the calculation of lens fit and prescription.**

- LENS K READINGS: should be measured in the usual way.
- FITTING SELECTION: Select lens BCOR's to match patient K readings to the nearest 0.05mm in both meridians. Assess fit and residual refractive error.
- FLUORESCEIN PATTERN: Ideally the fit should be equivalent to a spherical lens on a spherical cornea i.e. minimal spherical apical clearance and adequate edge lift.
- TORIC REFRACTIVE CORRECTION: If the lens is aligned to each meridian then the lens BVP on each meridian should equate with the ocular refraction in each meridian

  **e.g. K reading: 7.95 along 175 & 7.07 along 85**
  **Spec Rx: -3.00/-3.00 x 180**
  **Vertex Distance: 10mm**
  **Lens ordered: 7.95 x 7.05/9.80/-3.00 along flat -5.75 along steep**

- OVERALL SIZE: As a general rule, a larger diameter is preferable to a smaller diameter as lens stability and cent ration are improved. Normally 9.80

GENERAL GUIDANCE

(i) For each 0.05mm flatter than cornea 0.25D an extra increase plus power will be required.
(ii) For each 0.05mm steeper then -0.25 an extra minus power will be required. This can be applied to each meridian separately.

(iii) In general the aim is a spherical type fit with good centration and adequate even edge clearance around the lens.

# Technical Information

| | |
|---|---|
| Manufacture | Lathe Cut |
| Materials | ML92, ML210<br>Boston ES, Boston Equalens, Boston EO, Boston XO, Boston XO2 |

# Fitting Guide
# MAXIM VARIFOCAL

**Enabling all existing wearers of Maxim & Maxim Ultra to continue with the same design when they become presbyopic, Providing a practical solution for all presbyopes new to the Maxim range.**

| FEATURES | BENEFITS |
|---|---|
| ●True Varifocal | No visible transition from distance to reading. The practical solution for new presbyopes. |
| ●Aspheric front surface | Centre Distance design .Generates reading addition. No restriction on reading addition. |
| ●Back Surface<br>●Spherical Optic Zone | Best possible optical quality |
| ● Back Surface<br>●Aspheric periphery | Easy fit from existing Maxim and Maxim Ultra patients. Optimum comfort, adaptation, on eye dynamics |
| ●Constant Average Thickness | All lenses, regardless of power, have the same mean thickness value. This ensures consistent cent ration and movement and the Dk/t is constant throughout the power range |
| ● Constant tear layer profile | Maintains a consistent fluroscein pattern beneath the lens, regardless of K readings. Studies show high first fit success rate, making the lens easy to fit when empirical fitting. |
| ●Easy to fit | For existing Maxim range wearers simply provide current specifications & reading add . For new wearers empirical fitting by supplying K readings, Spec Rx, & reading add. |
| ●Recommendations for fitting | 9.80mm diameter should be the first choice.The reading add to be specified = Px add plus +0.50D |

# Technical Information

| | |
|---|---|
| Manufacture | Lathe Cut |
| Materials | ML92, ML210<br>Boston ES, Boston Equalens, Boston EO, Boston XO, Boston XO2 |
| Powers | -25.00 to +25.00 (in 0.25D steps). Reading add to order. |
| Diameters | 9.30mm/ 9.80mm. |
| Average Thickness | 0.19mm (all powers) |
| Base Curves (BOZR) | 7.00mm to 9.00mm (0.05mm steps) |

# Fitting Guide
# REVERSE GEOMETRY Design

**Reverse geometry GP contact lens fitting is effective in correcting surgically induced irregular corneas and with improved visual acuity and comfort. These lenses may be the best choice in cases in which surgical re treatment is unfeasible or undesirable.**

- LENS K READINGS: post refractive K readings should be taken in the usual way and obtain the pre surgical Keratometry readings, or the pre op prescription which can help us determine the reverse curve
- The lens should demonstrate a unique bulls-eye fit similar to a keratoconus fit
- The central zone should be in virtual alignment to the central cornea or very slightly apically steep
- The transition zone will show annulus of fluorescein surrounding the central area of alignment
- The mid-peripheral junction should show alignment to the mid-peripheral cornea and there should then be adequate peripheral clearance
- Central fit can be modified by steepening or flattening the BOZR
- MTO lenses made from computer assisted design programs can be supplied to individual requirements

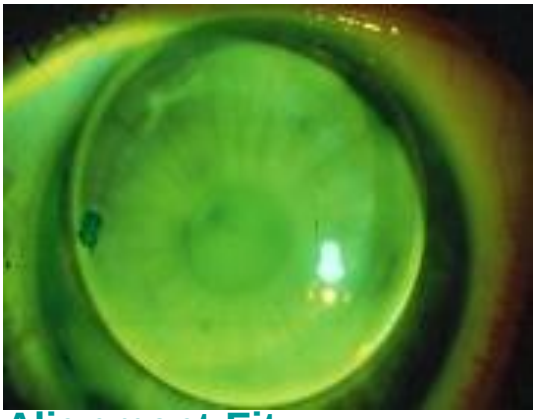
# Technical Information

| | |
|---|---|
| Manufacture | Lathe Cut |
| Materials | ML92 |
| Powers | -20.00 to +20.00 (in 0.25D steps) |
| Diameters | To Specification |
| Base Curves (BOZR) | 7.00mm to 9.00mm (0.05mm steps) |

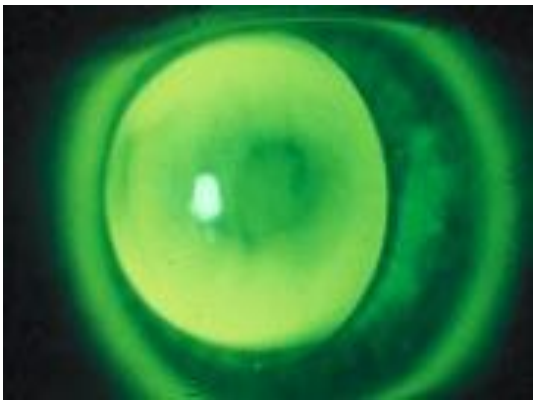
# Lens Fitting Examples

## Fluorescein Pattern

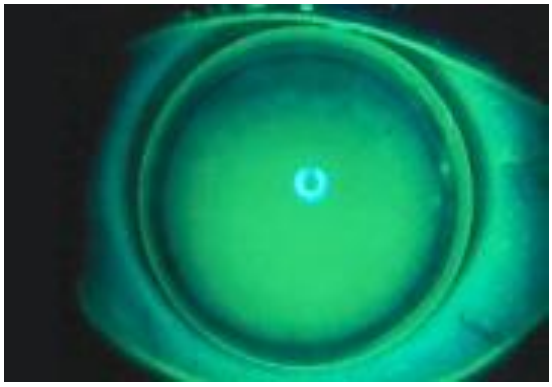
Typically, the fluorescein pattern of the final lens should show some mild apical bearing (“feather” touch) or alignment and the absence of peripheral bearing over more than 180° of its circumference. Excessive apical pooling or bearing should be avoided. A moderate edge lift is necessary to permit the edge of the lens to slide over the corneal surface with minimal resistance.



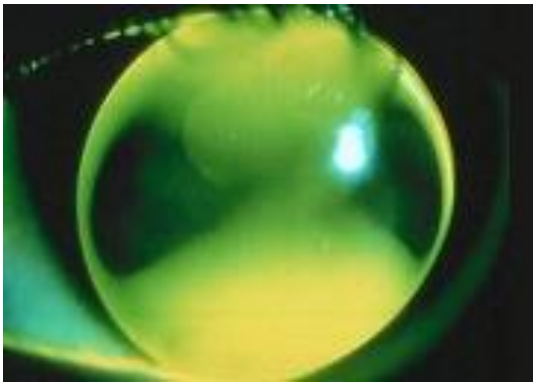
**Alignment Fit**



**Flat Fit**



**Steep Fit**



**Spherical lens on toric cornea**

# FOR BAUSCH & LOMB GP CONTACT LENSES

## Important: This information should be explained to the patient when supplied with Bausch & Lomb Contact Lenses

### INTENDED USE

Bausch & Lomb Contact Lenses can be prescribed for the correction of vision defects including myopia, hyperopia, presbyopia, aphakia, non-aphakia and astigmatism.

### LENS CARE PROCEDURES

Bausch & Lomb recommends that Bausch & Lomb lens care products be used with Bausch & Lomb Contact Lenses. Please refer to the appropriate guide for details. The practitioner should recommend a care system to the patient for the lenses. For whatever system is selected, the instructions which accompany these care products must be explained to the patient. Gas Permeable lenses are provided pre-soaked in Boston wetting and soaking solution.

### CONTRAINDICATIONS

Use your professional judgement and experience in evaluating patient of ocular suitability for contact lenses. In addition, Bausch & Lomb lenses are contraindicated when the following conditions exist:

Unhealthy patient eyes.
History of patient non-compliance with contact lens care and disinfection regimes, wearing restrictions, wearing schedule, or follow-up visit schedule.
Patient inability or unwillingness, because of age, infirmity or other mental or physical conditions, or an adverse working of living environment, to understand or comply with any warning, precautions, restrictions or directions.

### WARNINGS

After a thorough eye examination, including appropriate medical background, patients should be fully appraised by the prescribing practioner of all the risks with contact lens wear. Patients should be advised of the following warnings pertaining to contact lens wear:

Problems with contact lenses and lens care products could result in serious injury to the eye. It is essential that patients follow their eye care practitioners direction and all labelling instructions for proper use of lenses and lens care products, including the lens case. Eye problems, including corneal ulcers, can develop rapidly and lead to loss of vision.

When prescribed for the Frequent Replacement Programme, the need for strict compliance and care regime including cleaning of the lens case, wearing restrictions, wearing schedule, and follow-up visit schedule should be emphasised to the patient

Studies have shown that contact lens wearers who are smokers have a higher incidence of adverse reactions than non-smokers

# FOR BAUSCH & LOMB GP CONTACT LENSES

**PRECAUTIONS**

If a patient experiences eye discomfort, excessive tearing, vision changes, or redness of the eye the patient should be instructed to immediately remove lenses and promptly contact his of her eye care practitioner.
Contact lens wear may not be suitable for certain occupations or in other instances may require eye protection equipment
Environmental fumes, smoke, dust, vapours and windy conditions must be avoided in order to minimise the chances of lens contamination or physical trauma to the cornea
Hard and rigid gas permeable contact lens solutions, not indicated for use with soft lenses, may not be used in the soft lens care system. RGP lens solutions should not be used with soft lenses.
Serious corneal injury may result from mismatching lens and solutions types.
Eye injury from irritation or infection and damage to lenses may result if cosmetics, lotions, soaps, creams, hairspray or deodorants come into contact with lenses.
Tweezers of other tools should not be used by patients to remove a lens from a container. The lens should be poured into the hand or removed with a finger. Patients must be instructed on and demonstrate the ability to promptly remove the lens from their eyes.

**ADVERSE EFFECTS**

The following symptoms may occur;

- Eye pain
- Eye sting, burn or itch (irritation)
- Comfort is less than when lens was first placed on eye
- Feeling of something in the eye (foreign body, scratched area)
- Excessive watering (tearing) of the eye
- Unusual eye secretions
- Redness of the eyes
- Reduced sharpness of vision (poor visual acuity)
- Blurred vision, rainbows or haloes around objects
- Change in sensitivity to light (photophobia)
- Feeling of dryness

The patient should be instructed that if any of the above symptoms occur they should;

- Immediately remove the lens
- If the discomfort or problems stop, then look closely at the lens
- If the lens is in anyway damaged, do not put the lens back in the eye. Place the lens in the storage case and contact the eye care practitioner
- If the lens has dirt, an eyelash of other foreign body on it, of the problem stops and the lens appears undamaged, thoroughly clean, rinse and disinfect the lens, then re-insert it
- If the above symptoms continue after removal of the lens or recur upon insertion of the lens, the lens should be removed immediately and the patient should contact their eye care practitioner or a physician, who must determine the need for examination, treatment or referral without delay

# Did you know we supply disposable GP lens fitting sets?


- Assess the fit of the GP lens on eye before you order and minimise chair time by reducing the need to exchange lenses.
- It's hygienic and convenient. Simply fit your patient and then dispose of the lens. When you place the chosen lens order, we will replace any used lenses free of charge.
- Our fitting set contains 10 lenses in the Maxim design. It covers the majority of the average corneal parameters* and its small footprint won't take up valuable space in your consulting room.


## A range of products and services to fit your GP lens needs

**Technical Support and Training:**

For advice on lens materials and designs for your patients, or to book in-practice GP training, please call our technical helpline on **0870 850 7921**

**It's Easy to Order:**

Call your Bausch + Lomb Territory Manager or Customer Services on **0870 850 7921**

Or use our new upgraded website **www.bauschgp.com** with free freight for all orders.

All orders are shipped within 48 hours.


**To receive your fitting set contact your Territory Manager or call Customer Services today.**

BAUSCH+LOMB
See better. Live better.

160th Anniversary

* BCOR's include 7.50, 7.60, 7.70, 7.75, 7.80, 7.85, 7.90, 7.95, 8.00, 8.10. Power -3.00 DS

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# For All Technical GP Queries
# Telephone B&L Hastings
# 0870 8507921