



Kontaktlinsen

Lentilles de contact

Lenti a contatto

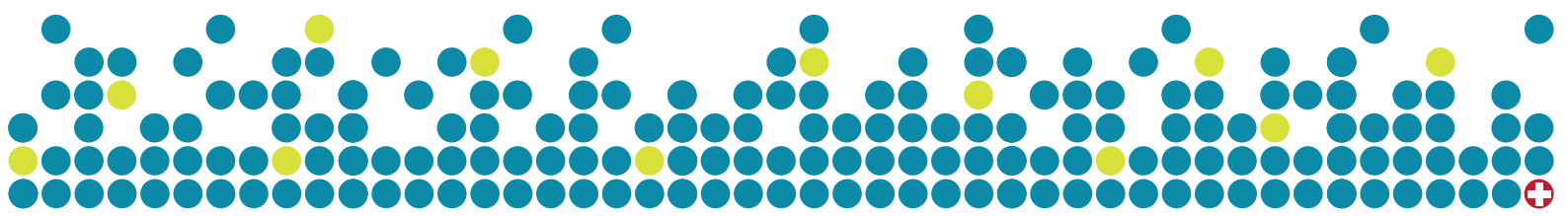
Lentes

Contact lens



simplicity without limits

# Products 2018 Edition





Type of product	Product name	Variant name	Page
Spherical	Orbis		6
Toric	Toris	Ext Dyn / Dec Int Dyn Int Bal	7
Spherical progressive	Borelis		8
Toric progressive	Torelis	Ext Dyn / Dec Int Dyn Bal Dyn	9
Keratoconus	HydroCone	Ext Dyn Ext Dyn Progressive	10
Post operative	HydroMed	Ext Dyn Ext Dyn Progressive	11

#### Product variants

Cosmetic colours		HydroColor / SUN	12
Prosthetic		HydroColor Pro	13
Therapeutic		HydroColor Therapy	13
Myopia Prevention		Relax / Relax T	14
Therapeutic		Bandage Bandage x-large Baby lens	15

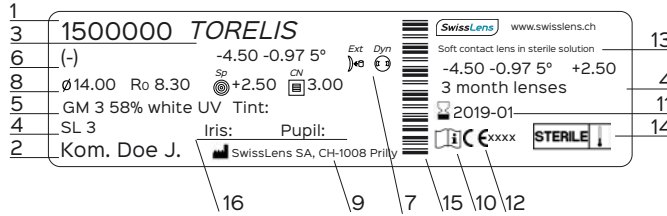
Fitting advice and guide Soft Materials			16 / 17 18
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Spherical	Orbiflex	SA S2A S3S	20
Progressive	Boriflex	SA S2A S3S	21
Toric	Toriflex	BT TP	22
Keratoconus	FlexCone	S3S S3S Progressive	23
Post operative	FlexMed	S2S S2S Progressive	24
Custom made	Orbiflex Boriflex	SxS SxS	25

#### Product variants

Orthokeratology	Orbiflex	OK / OK Relax	26
Myopia Prevention	Orbiflex	Relax	27
Hybrid	AirFlex		28/29
Scleral	Orbiflex	Scleral	30
Fitting advice RGP Materials			31 32
Modification of secondary parameters			33
General Terms and Conditions			34
Order options			35

Labels and symbols



- Spherical
- Aspheric
- Toric
- Back toric (Int)
- Front toric (Ext)
- Dynamic stabilisation (Dyn)
- Ballast stabilisation (Bal)
- Bitoric (BT)
- Front-toric prismatic (TP)
- Bifocal (Bf)
- Simple progressive (Sp)
- Multi progressive (Mp)
- Reading zone in center
- Reading zone in periphery

- 1 **SN** Serial number (SN). A \* before SN indicates a special modification of the contact lens. See delivery note.
- 2 Patient reference
- 3 **REF** Product name and Geometry
- 4 Renewal and range
- 5 Material and tint
- 6 Variantion/ Stabilisation
- 7 Parameters
- 8 Manufactur address
- 9 See information notice
- 10 Shelf life
- 11 CE Marking
- 12 Content description
- 13 **STERILE** Heat sterilisation
- 14 Barcode = SN
- 15 Colour code and -diameter

Abbreviations

Abreviations according to EN ISO 18369-2:2006		
$\varnothing_T$		Total diameter
$r_0$	BC	Back optic base curve
$r_{0fl}$		Flat meridian back optic base curve
$r_{0st}$		Steep meridian back optic base curve
$r_1, r_2, r_n$		Peripher back optic base curves
$\varnothing_0$		Back optic zone diameter
$\varnothing_{a0}$		Front optic zone diameter
$\varnothing_1, \varnothing_2, \varnothing_n$		Peripheral back optic zone diameters
$t_c$	ep	Central geometric thickness
$t_{ER}$		Radial periphery thickness
$t_{PJO}$		Peripheral Optic zone thickness
$l_{EA}$		Axial edge lift
$l_{ER}$		Radial edge lift
Dk		Oxygen permeability
Dk/t	Dk/e	Oxygen transmissibility
$r_b$	$r_{bor}$	Peripheral curve radius

Andere Abkürzungen		
$r_{cfl}$	K	Flattest corneal curve
$r_{cst}$	K'	Steepest corneal curve
$F'_v$		Contact lens power
Sph		Sphere
$F'_{fl}$	Sph <sub>fl</sub>	Sphere flat meridian
$F'_{st}$	Sph <sub>st</sub>	Sphere steep meridian
Cyl		Cylinder
Axe		Axis
En		Eccentricity
BCf		Base Curve factor
Zoc		Central optic zone (Progressive contact lenses)
HB		Bumps height
LB		Bumps length
++		Very strong flattening
+		Strong flattening/ pronounced
-		Standard flattening/ flowing
--	Mono	Monocurve

Increment: 0.01 mm, 1° for axes, unless otherwise indicated

# Soft contact lenses

# 6 Spherical soft contact lenses

## Orbis

Orbis

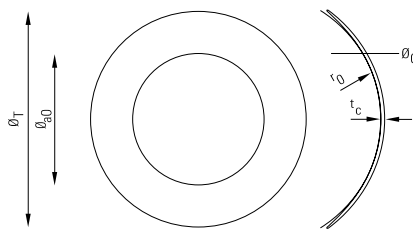
### Technical data

$\varnothing_T$	Total diameter	12.00 to 15.00... 19.00 mm (according to materials)
$r_0$	Base curve	7.00 to 12.00 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
	Flattening	Mono / (-) / (+)

Modifiable secondary parameters, see p. 30

### Geometry

- Spherical front and back optic zones
- Aspheric flattening



Fitting advice see p. 16

Product variations	Variant name	More information at page
Cosmetic Hydrogel	HydroColor	p. 12
Sun colour Hydrogel	HydroColor SUN	p. 12
Prosthetic Hydrogel	HydroColor Pro	p. 13
Myopia Relaxing	Relax	p. 14


**Toris Ext**

**Toris Int**

**Toris Bal**

### Technical data

$\varnothing_T$	Total diameter	12.00 to 15.00... 19.00 mm (according to materials)
$r_0$	Base curve	7.00 to 12.00 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
	Cylinder	-0.25 to -8.00 dpt
	Axis	0° to 180°
	Flattening	Mono / (-) / (+)

Modifiable secondary parameters, see p. 30

### Geometry

#### Toris Ext Dyn

- Back spherical optic zone with aspheric flattening
- Front toric optic zone
- Dynamic stabilisation with bumps nasal and temporal
- Low corneal astigmatism, internal or combined astigmatism
- Marking at 0° and 180°

#### Toris Ext Dec

same as Toris Ext Dyn but with decentered bumps inferior

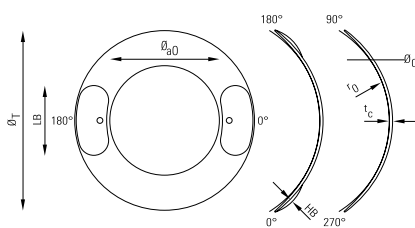
#### Toris Int Dyn

- Back toric optic zone with aspheric flattening
- Front spherical optic zone
- Dynamic stabilisation with bumps nasal and temporal
- Corneal astigmatism > 2.5 dpt improves stabilisation
- Curve difference over 0.50 mm
- Refraction axis = axis (rcfl) +/- 10°
- Marking at 0° and 180°

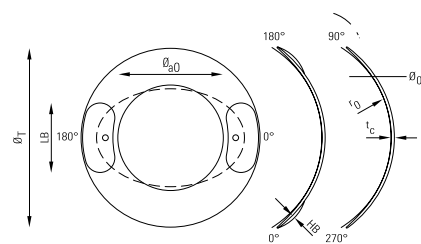
#### Toris Int Bal

- Back toric optic zone with aspheric flattening
- Front spherical optic zone
- Ballast stabilisation
- Deep lower or upper eyelid
- Unsuccessful fitting with dynamic stabilisation
- Very large eyelid (> 11)
- Marking at 0° and 180°

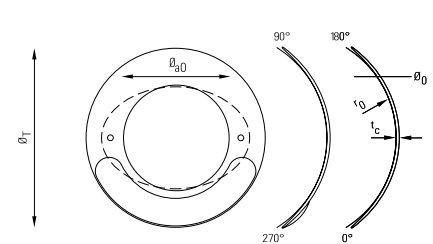
#### Toris Ext Dyn / Dec



#### Toris Int Dyn



#### Toris Int Bal



Fitting advice see p. 16

### Product variations

### Variant name

### More information at page

Cosmetic Hydrogel  
Sun colour Hydrogel  
Prosthetic Hydrogel  
Myopia Relaxing

HydroColor  
HydroColor SUN  
HydroColor Pro  
Relax T

p. 12  
p. 12  
p. 13  
p. 14

# Borelis



## Technical data

$\varnothing_T$	Total diameter	12.00 to 15.00... 19.00 mm (according to materials)		
$r_0$	Base curve	7.00 to 12.00 mm		
$F'_V$	Sphere	-40.00 to +40.00 dpt		
Add	Addition	+0.50 to +4.00 dpt		
	Flattening	Mono / (-) / (+)		
Zoc	Central optic Zone	Bifocal (Bf): 1.00 to 4.50 mm Simple progressive (Sp): 1.50 to 4.50 mm Multi progressive (MP): 1.00 to 2.00 mm		
	Position	⊙ Bf	⊙ Sp	⊙ Mp
	Reading zone in center	☐	√	√
	Reading zone in periphery	☐	√	√

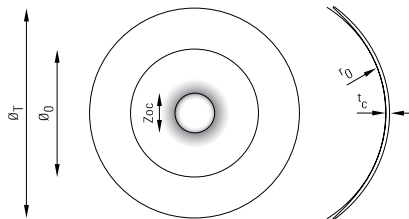
Modifiable secondary parameters, see p. 30

## Geometry

Spherical back position optic zone with aspheric flattening

Front spherical multicurve optic zone

- Bifocal (Bf): two spherical concentric optic zones distance / near
- Simple progressive (Sp): spherical and aspheric concentric zones: distance / intermediate / near
- Multi progressive (Mp): multiple spherical and progressive concentric zones: distance / intermediate / near



Fitting advice see p. 16 and recommendation of multifocal system see p. 17

Product variations	Variant name	More information at page
Cosmetic Hydrogel	HydroColor	p. 12
Sun colour Hydrogel	HydroColor SUN	p. 12





**Torelis Ext**



**Torelis Int**



**Torelis Bal**

### Technical data

$\varnothing_T$	Total diameter	12.00 to 15.00... 19.00 mm (according to materials)		
$r_0$	Base curve	7.00 to 12.00 mm		
$F'_V$	Sphere	-40.00 to +40.00 dpt		
	Cylinder	-0.25 to -8.00 dpt		
	Axis	0° to 180°		
Add	Addition	+0.50 to +4.00 dpt		
	Flattening	Mono / (-) / (+)		
Zoc	Central optic Zone	Bifocal (Bf): 1.00 to 4.50 mm Simple progressive (Sp): 1.50 to 4.50 mm Multi progressive (MP): 1.00 to 2.00 mm		
	Position	Bf	Sp	Mp
	Reading zone in center	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Reading zone in periphery	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Modifiable secondary parameters, see p. 30

### Geometry

#### Toris Ext Dyn

- Back spherical optic zone with aspheric flattening
- Front toric optic zone
- Dynamic stabilisation with bumps nasal and temporal
- Low corneal astigmatism, internal or combined astigmatism
- Marking at 0° and 180°

#### Toris Int Dyn

- Back toric optic zone with aspheric flattening
- Front spherical optic zone
- Dynamic stabilisation with bumps nasal and temporal
- Corneal astigmatism > 2.5 dpt improves stabilisation
- Curve difference over 0.50 mm
- Refraction axis = axis (rcfl) +/- 10°
- Marking at 0° and 180°

#### Toris Int Bal

- Back toric optic zone with aspheric flattening
- Front spherical optic zone
- Ballast stabilisation
- Deep lower or upper eyelid
- Unsuccessful fitting with dynamic stabilisation
- Very large eyelid (> 11)
- Marking at 0° and 180°

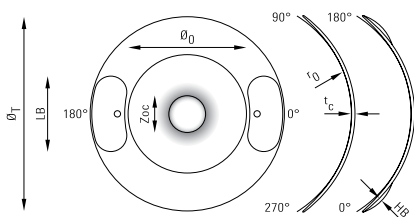
#### Torelis Ext Dec

same as Toris Ext Dyn but with decenterd bumps inferior

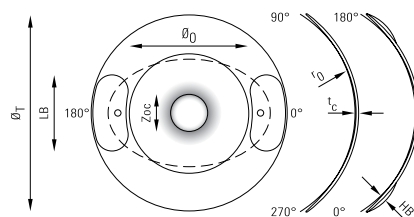
#### Front spherical multicurve optic zone

- Bifocal (Bf): two spherical concentric optic zones distance / near
- Simple progressive (Sp): spherical and aspheric concentric zones: distance / intermediate / near
- Multi progressive (Mp): multiple spherical and progressive concentric zones: distance / intermediate / near

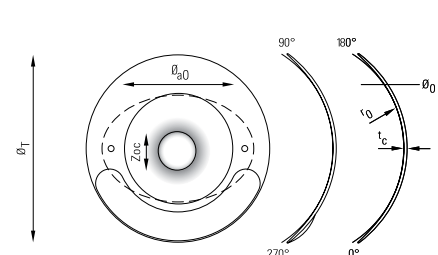
#### Torelis Ext Dyn / Dec



#### Torelis Int Dyn



#### Torelis Int Bal



Fitting advice see p. 16 and recommendation of multifocal system see p. 17

### Product variations

### Variant name

### More information at page

Cosmetic Hydrogel  
Sun colour Hydrogel

HydroColor  
HydroColor SUN

p. 12  
p. 12

# HydroCone

## HydroCone

## HydroCone P

### Technical data

$\varnothing_T$	Total diameter	12.00 to 17.00 mm
$r_0$	Base curve	7.00 to 10.80 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
	Cylinder	-0.01 to -8.00 dpt
	Axis	0° to 180°
Add	Addition	+0.50 to +4.00 dpt
$t_c$	Optimised centre thickness	Standard K12 = 0.42mm, K34 = 0.52 mm Range of thickness: 0.35 to 0.59 mm
$l_{EA}$	Flattening	K12 + K34 ++
Zoc	See Borelis page. 8	

Modifiable secondary parameters, see p. 30

### Geometry

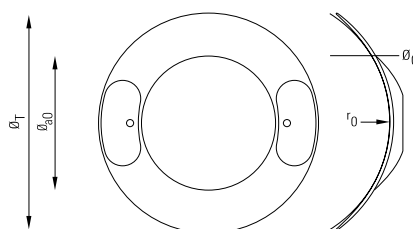
#### HydroCone Ext Dyn

- Spherical back optic zone with strong aspheric flattening
- Front toric optic zone

- Dynamic stabilisation with bumps nasal and temporal
- Optimised centre thickness

#### HydroCone Ext Dyn Progressive

- Front optic zone:
  - Bifocal (Bf)
  - Simple progressive (Sp)
  - Multi progressive (Mp)



### First contact lens choice

We suggest working with trial lenses with cyl -0.01 dpt.

#### Keratoconus classification

First apply the topographic indications or the following rules:

- $V_{cc} > 0.6$  and/or keratometry  $> 6.80$  mm: Grade 1 or 2 (HydroCone K12)
- $V_{cc} < 0.6$  and/or keratometry  $< 6.80$  mm: Grade 3 or 4 (HydroCone K34)

#### Diameter and base curve

1st trial lens if HIVD is between 11.5 and 12.0 mm: (if not, request customer service)

- HydroCone K12:  $r_0 = 8.00 / \varnothing_T = 14.00$  mm
- HydroCone K34:  $r_0 = 7.80 / \varnothing_T = 13.70$  mm

#### Advice

- The first trial lens helps to validate  $r_0 / \varnothing_T$ .
- Dynamic stabilisation marks are needed to measure the stabilisation axis.
- The power ( $F'_V$ ) is spherical because part of the correction is made by the tear film and can't be anticipated. The final cylinder corresponds to the residual astigmatism.
- $F'_V$  for the trial lens order: spectacle sphere (adjust BVD = 0) with -0.01 dpt  $\times$  180° cylinder.
- For changes and control over several months always use the initial (genesis) lens for over refraction.
- Use upper and lower eyelids to remove the contact lens.
- If halo occurs increase optic zone diameter.
- Measurement of the residual astigmatism with autorefractometer plus subjective refractometry.
- Due to geometry, the contact lens can slip a little bit to the bottom.
- Increasing centre thickness can improve the visual acuity.
- HydroCone P fitting: initially fit with HydroCone (single vision toric lens) then add progression in a second step.

### Technical data

$\varnothing_T$	Total diameter	12.00 to 16.00 mm	
$r_0$	Base curve	7.00 to 12.00 mm	
$F'_V$	Sphere	-40.00 to +40.00 dpt	
	Cylinder	-0.01 to -8.00 dpt	
	Axis	0° to 180°	
Add	Addition	+0.50 to +4.00 dpt	
$t_c$	Center thickness	Standard (see Toris) or optimised centre thickness 0.35 bis 0.59 mm	
$l_{EA}$	Flattening		Standard
		S1S	1 customisable peripheral zone $r_1 = 8.70$ mm $\varnothing_0 = 9.00$ mm
		S2S	2 customisable peripheral zones $r_1 = 8.30$ mm $r_2 = 8.70$ mm $\varnothing_0 = 9.00$ mm $\varnothing_1 = 11.00$ mm
Zoc	Siehe Borelis S. 8		

Modifiable secondary parameters, see p. 30

### Geometry

#### HydroMed Ext Dyn

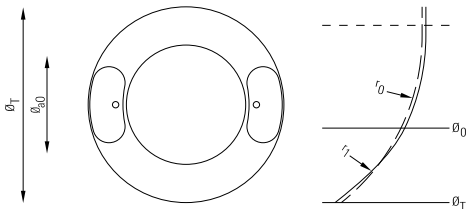
- Spherical back optic zone with customisable spherical flattening (inverted or not)

- Front toric optic zone
- Dynamic stabilisation with bumps nasal and temporal

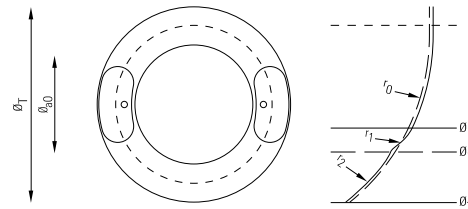
#### HydroMed Ext Dyn Progressive

- Front optic zone
  - Bifocal (Bf)
  - Simple progressive (Sp)
  - Multi progressive (Mp)

#### HydroMed S1S



#### HydroMed S2S



### First contact lens choice

We suggest working with trial lenses with cyl -0.01 dpt.

#### Geometry choice

- Post LASIK: 2 curves (S1S), 1 inverted flattening
- Post keratoplasty: 3 curves (S2S), 2 inverted flattenings

#### Diameter and base curve

1st trial lens:

- $\varnothing_T$ : HVID + 2.50 mm
- $\varnothing_0$ : central operated optic diameter measured by topography. Otherwise default value
- $r_0$ : flattest K from the topograph at the central zone + 0.30 mm
- $\varnothing_1$  (S2S): external diameter of the operated zone
- $r_1$  (S1S) and  $r_2$  (S2S): standard base curve of a soft contact lens (~8.70 mm if  $\varnothing_T$  is 14.2 mm)
- $r_1$  (S2S): overlapping zone (Zr),  $r_0 < r_2$ :  $r_1 = r_2 + \sim 0.30$  mm /  $r_0 > r_2$ :  $r_1 = r_2 - \sim 0.30$  mm

#### Advice

- The first trial lens helps to validate base curves and diameters.
- $F'_V$  for the trial lens order: spectacle sphere (adjust BVD = 0) with -0.01 dpt  $\times$  180° cylinder.
- It's possible to use fluo image simulation software to determine the different zones.
- We recommend using Fluorescein with large molecules to detect and identify problems resulting from the fit.
- Due to inverted flattening, a weak mobility of the contact lens is normal.
- It's possible to modify centre thickness to adjust cornea irregularities (see HydroCone).
- HydroMed P fitting: initially fit with HydroMed (single vision toric lens) then add progression in a second step.

## Cosmetic colour soft contact lens

**Orbis Toris Borelis Torelis Relax****HydroColor****AirColor**

## Geometry




























































































































































With AirColor (Silicone) HydroColor (Hydrogel) you have the possibility to fit individual color contact lenses, without compromise.

The following design types are available for the cosmetic HydroColor:

Orbis, Toris, Borelis, Torelis, HydroMed, Relax

The fitting advice from each of these designs can be used for the fitting of AirColor and HydroColor.

## Variants of colours and diameters

																																																																		
Iris diameters	11.0 / 11.3 / 11.8 12.2 / 12.6 / 13.0	2.6 / 3.2 / 3.7 / 4.2 / 4.8 / 5.2 / 6.2 / 7.2 / 8.0 9.0 / 10.0 / 11.0 / 11.3 / 11.8 / 12.2 / 12.6 / 13.0																																																																
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<p>The printed colours above are indicative and may vary on the contact lenses! Ask us for your individual trial lens kits.</p>																																																																		

## Technical data

- Spherical:  $\pm 10.00$  dpt
- Toric: sph  $\pm 10.00$  dpt, cyl  $-2.00$  dpt
- Add:  $+0.50$  bis  $+4.00$  dpt
- Material: Contaflex CTF 67% (HydroColor) Definitive 74% SiH (AirColor)

For additional parameters and variations please ask the customer service.

Our translucent colours do not have any negative influence on the DK value. It is exactly the same - with or without colour.

## Toris Orbis

### HydroColor Pro

#### Geometry

HydroColor Pro is an individual prosthetic contact lens with an opaque back surface, that is produced exclusively by SwissLens.

The HydroColor Pro is offered in two different variations. In both variations we offer 30 selected colours from our colour sample book to choose with the patient the optimal match. For „Selection“ we offer a standard range of parameters for Orbis and Toris, for the „Selection plus“, advanced parameter and HydroMed is available.

#### Variants of diameters

Iris diameters

- 10.8 / 11.2 / 11.5 / 12.0 / 12.5 / 12.8

Clear pupil diameters

- 2.7 / 3.3 / 3.8 / 4.2 / 4.8

Black pupil diameters

- 2.6 / 3.2 / 3.7 / 4.2 / 4.8 / 5.2

#### Selection

Our colour sample book allows you to match the colour of your patients eye together with your customers.

The hue and intensity is specified by a colour code. This ensures reorders of coloured lenses with the same result and a better reproducibility.

Technical Data:

- sph +/- 8.00 dpt, cyl - 2.00 dpt
- Ø: 13.00 to 15.50 mm
- r<sub>0</sub>: 8.00 to 9.50 mm
- Advanced parameters via Selection plus



#### Cleaning advice

In order to avoid damage to the colour, especially opaque fading, please use only recommended solution\*. The Acucare one step-T is tested and optimally compatible.

Attention! Do not use any care system which contains EDTA. Please ask for further compatible solutions.

Our translucent colours do not have any negative influence on the DK value. It is exactly the same - with or without colour.

\*Ask us for the complete list of approved contact lens care products.



### HydroColorTherapy

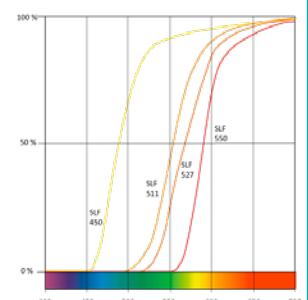
Special therapeutic edge filter contact lenses. Colours comparing to multilens

SLF 450  SLF 527 

SLF 511  SLF 550 

Special colours for color therapy

SLF pink  SLF green  SLF purple 



# Orbis Toris

## Relax Relax T

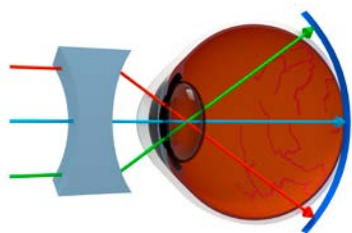
### Technical data

$\varnothing_T$	Total diameter	12.00 to 15.00... 19.00 mm (according to materials)
$r_0$	Base curve	7.00 to 12.00 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
	Cylinder	-0.25 to -8.00 dpt
	Axis	0° to 180°
	Flattening	Mono / (-) / (+)

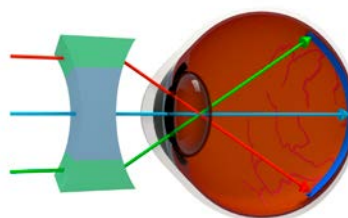
Modifiable secondary parameters, see Borelis/ Torelis p. 30

### Geometry

This new optical design adjusts peripheral aberrations allowing a full and un-distorted clear image to fall on the retina, allowing the patient comfortable vision in the near. The lens geometry is of a center distance multifocal design, enhanced with a special polynomial progression in the periphery.



unifocal defocus retinal image



retinal image with Relax

### Advice

- Fitting is identical to a unifocal contact lens
- Adjustment period for the patient will usually be about 1-2 weeks (e.g. halos)
- Slightly reduced distance VA's may occur at the beginning
- Best results with myopic children, teenagers, young adults and esophoric pre-presbyopic adults with a lack of accommodation and a visual stress at near.

### Product variations

### Variant name

### More information at page

Cosmetic Hydrogel  
Sun colour Hydrogel

HydroColor  
HydroColor SUN

p. 12  
p. 12

Fitting advice comparing Orbis and Toris see p. 16

Orbis-B

Orbis-XL

Orbis-T

## Geometry

- Spherical optical zones on front and back surface
- Aspherical flattening

## Orbis-T

Bandage lens				
$r_0$		$\varnothing_T$	$F'_V$	$l_{EA}$ flattening
9.20 – 12.00 mm	10.00 mm (std)	17.00 mm	Plano	- / + (std)
9.60 – 12.00 mm	10.40 mm (std)	18.00 mm	Plano	- / + (std)

Materials: Definitive 74, Igel 77 (standard)

## Orbis-XL

X-large bandage lens				
$r_0$		$\varnothing_T$	$F'_V$	$l_{EA}$ flattening
11.00 – 14.00 mm	12.00 mm (std)	21.00 mm	Plan	- / + (std)

Material: Definitive 74

## Orbis-B

Baby lens				
$r_0$		$\varnothing_T$	$F'_V$	$l_{EA}$ Abflachung
6.90 – 12.00 mm	7.40 mm (std)	11.50 mm	-40.00 to +40.00 dpt	- (std) / +
6.90 – 12.00 mm	7.60 mm (std)	12.00 mm	-40.00 to +40.00 dpt	- (std) / +
7.20 – 12.00 mm	7.80 mm (std)	12.50 mm	-40.00 to +40.00 dpt	- (std) / +
7.40 – 12.00 mm	8.00 mm (std)	13.00 mm	-40.00 to +40.00 dpt	- (std) / +

Materials: Definitive 74, Igel 77 (standard)

## First contact lens choice

- Calculate glass power to DVO 0 mm
- $\varnothing_T$ : Diameter = HVID + 1.50 mm
- $r_0$ : K-flat + 0.30 mm

Babies and infants are not always very cooperative in the fitting room. In cases where no measurements can be made, the following table with standard values can give some support for the choice of the first contact lens:

Age	$r_0$	$\varnothing_T$	Power in case of aphakia
0 - 3 months	7.40 mm	12.00 mm	+ 40.00 dpt
3 - 6 months	7.60 mm	12.50 mm	+ 36.00 dpt
6 - 9 months	7.80 mm	13.00 mm	+ 33.00 dpt
9 - 12 months	8.00 mm	13.50 mm	+ 30.00 dpt

(std) = standard / default value

## Diameter and Base curve choice for the first contact lens

1. Measurement of the corneal diameter (HVID + 0.6 mm)\* and K-readings
2. Determine the contact lens diameter  $\varnothing_T$  (use table below)
3. Determine of the Base curve  $r_0 = r_{cfI} + BCf$  (use table below,  $r_{cfI}$  = flattest central K)

		Corneal diameter							
		small		medium			large		
		11.10	11.30	11.50	11.70	11.90	12.10	12.30	12.50
Contact lens diameter	13.20	0.60	0.50	0.40					
	13.40	0.70	0.60	0.50	0.40				
	13.60	0.80	0.70	0.60	0.50	0.40			
	13.80	0.90	0.80	0.70	0.60	0.50	0.40		
	14.00	1.00	0.90	0.80	0.70	0.60	0.50	0.40	
	14.20	1.10	1.00	0.90	0.80	0.70	0.60	0.50	0.40
	14.40	1.20	1.10	1.00	0.90	0.80	0.70	0.60	0.50
	14.60		1.20	1.10	1.00	0.90	0.80	0.70	0.60
	14.80			1.20	1.10	1.00	0.90	0.80	0.70
		Base Curve factor (BCf)							

■ Orbis ( $\varnothing_{\text{Cornea}} + 2.10 \text{ mm} / BCf = 0.60 \text{ mm}$ )

■ Toris Bal – Torelis Bal – Borelis ( $\varnothing_{\text{Cornea}} + 2.30 \text{ mm} / BCf = 0.70 \text{ mm}$ )

■ Toris Int/Ext – Torelis Int/Ext ( $\varnothing_{\text{Cornea}} + 2.50 \text{ mm} / BCf = 0.80 \text{ mm}$ )

**Example:** Parameter for Toris Ballast:

Cornea parameters:  $\varnothing_{\text{Cornea}} = 11.70 \text{ mm} / K_{\text{reading}} = 7.80 / 7.70 \text{ mm}$

- $\varnothing_T = 11.70 \text{ mm} + 2.30 \text{ mm} = 14.00 \text{ mm}$
- $r_0 = 7.80 \text{ mm} + 0.70 \text{ mm} = 8.50 \text{ mm}$

for 0.40 mm delta K, reduce 0.10 mm on  $r_0$

Definitive 74: 0.10 mm steeper

\* Information: 80% of the corneal curves are statistically between 11,3 and 12,1 mm.

## Progress of the adaptation

1. Insert trial lens for a duration of between 30 minutes and 2 hours. Over refraction (you can use the autorefractometer for getting an idea of cyl/axis).
2. Biomicroscopy ( $\times 10$  to 15) white light: observe the lens with patient looking straight ahead and during eye movement.
3. Mobility by eyelid movement, (Push up test).
4. Sag of the lens should be from 1 to 2 mm downwards.
5. Appearance of the front optic zone: tear film, hydration, lubrication, deposit.
6. Keratometry on the contact lens: (deformation of the mires).
7. Check for corneal and conjunctival staining with fluorescein after lens removal.
8. Order the definitive lens on the basis of the SN.



## First contact lens choice

### Progression system and central optic zone (Zoc)

#### Reading zone choice

1. Centre near vision in most cases
2. Peripheral near vision if distance vision is poor, high myopia or decentrated pupil.

#### Procedure






- Determine dominant eye
- Find maximum convex (+) correction for distance vision
- Find the best acuity in distance vision to optimise Zoc diameter choice
- Determine the patients needs for: distance / intermediate / near

### Multifocal design choice

Requirements	Bf ☉ Bifocal	SP ☉ Simple progressive	Mp ☉ Multi progressive
Hyperopia			√
Myopia Addition < 1.75 dpt	√		
Myopia: Addition ≥ 1.75 dpt		√	
Priority in distance vision	√	√	
Priority in near vision	√		√
Priority in intermediate vision (computer)			√
Use in low light in distance vision		√	
Use in low light in near vision			√
Good contrast	√		√
Low Helos		√	
Anisometry > 2.00 dpt	√	√	
Amblyopia	√	(√)	
Modified monovision care	(√)	√	

### Central optic zone, position and diameter:

recommendations for the 1st choice: standard pupil (3.50–4.00 mm) with normal lighting

	Bf ☉ Bifocal		Sp ☉ Simple progressive		Mp ☉ Multi progressive
	Centre near 	Periph. near 	Centre near 	Periph. near 	Centre near 
Dominant eye	2.25	3.75	2.50	4.00	1.50
Non-dominant eye	2.75	3.25	3.00	3.50	1.75
Undefined	2.50	3.50	2.75	3.75	1.50

For non standard pupil size or for distance/near preference, fit the Zoc in steps of 0.25 mm

	Definitive (silicone 74)	Igel 77	CTF 67	GM3 58	Igel 58	GM3 49
DK Fatt ISO 9913-1	60*/44**	39*/29**	30*/22**	25*/19**	21*/16**	16*/12**
Material type	Silicone Hydrogel	Hydrogel	Hydrogel	Hydrogel	Hydrogel	Hydrogel
Manufacturer	Contamac	Contamac	Contamac	Contamac	Contamac	Contamac
Classification	Filcon V3	Filcon II3	Filcon II2	Filcon II1 (Acofilcon A)	Filcon II1	Filcon I1 (Acofilcon B)
Water content	74%	77%	67%	58%	58%	49%
Refractive index	1.37	1.37	1.39	1.41	1.4	1.42
Handling tint	klar/blau	klar	klar	klar / blau	klar	klar / blau
UV	√ (blau)	√	√	√	√	√
Normal tear film	+++	++	+++	+++	++	++
Reduced tear film	+++	+	+	++	+	+++
Watery tear film	+++	+++	+++	++	++	++
Tear film with lipid	+	+	+	+++	++	+++
Tear film with protein	+	+	+	++	+++	+++
Durability	+	+	++	++	+++	+++
Initial comfort	+++	+++	+++	++	+	+
Low dehydration	+++	+	+	+++	++	+++
Moistening	+++	++	++	+++	+	+++
Dry eye	+++	+++	++	++	+	+++
Non-ionic	√	√	√	√	√	√

\*  $\times 10^{-11}$  (cm<sup>2</sup>/sec) [ml O<sub>2</sub>/(ml  $\times$  mm Hg)]

\*\*  $\times 10^{-11}$  (cm<sup>2</sup>/sec) [ml O<sub>2</sub>/(ml  $\times$  hPa)]

Default material: GM3 58% white

#### Quality assurance

These materials are in conformity with the standard ISO 10993-1 defining the biocompatibility of materials. SwissLens manufacturing process warrants this biocompatibility even after the manufacturing process, in particular without adding polish material. This standard is required by the quality assurance system of SwissLens

CONTAMAC



# Gas permeable contact lenses

# Orbiflex

## Orbiflex SA

## Orbiflex S2A

### Technical data

$\varnothing_T$	Total diameter	7.50 to 12.00 mm
$r_0$	Base curve	6.00 to 9.00 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
En	Eccentricity	0.10 to 0.90 (depending on geometry)

Modifiable secondary parameters, see p. 32

### Geometry

- Spherical front and back optic zones

Orbiflex SA / ASP

- 1 aspheric flattening

Orbiflex S2A

- 2 aspheric flattenings

Orbiflex SMS

- 3 spherical flattenings

### Flattening

Orbiflex SA / ASP

- Eccentricity: 0.30 to 0.80

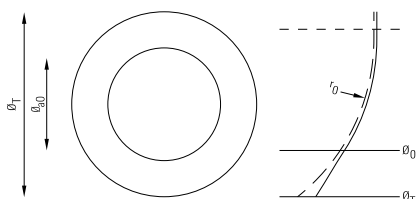
Orbiflex S2A

- Eccentricity zone 1: 0.10 to 0.90
- Aspheric zone 2: standard (-) or strong (+) opening

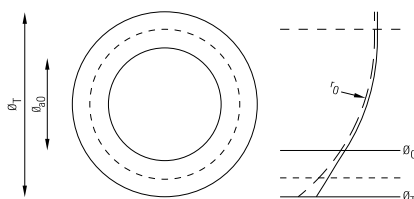
Orbiflex S3S

- Eccentricity zone 1: 0.10 to 0.90

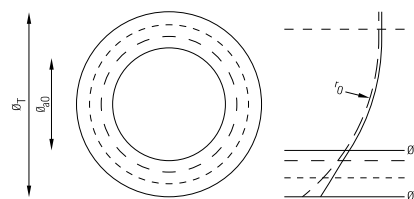
SA / ASP



S2A



S3S



### First contact lens choice

#### Geometry choice

- Orbiflex SA: corneal toricity < 3/10 mm
- Orbiflex S2A: corneal toricity < 4/10 mm
- Orbiflex SMS: strong toricity, irregular topography special biometry (small  $r_0$  / large  $\varnothing_T$  or larger  $r_0$  / small  $\varnothing_T$ )

#### Diameter and base curve

Orbiflex SA

- $\varnothing_T = 9.60$  (SA)
- $\varnothing_T = 10.20$  (ASP)
- $r_0 =$  flattest corneal curve ( $r_{cfl}$ )

Orbiflex S2A

- $\varnothing_T = 9.80$
- $r_0 =$  flattest corneal curve ( $r_{cfl}$ )

Orbiflex SMS

- $\varnothing_T = 9.20$
- $r_0 =$  flattest corneal curve ( $r_{cfl}$ )

#### Flattening

- Orbiflex SA / ASP: eccentricity (En) = eccentricity of the cornea at 30° rounded up to the next 1/10
- Orbiflex S2A:
  - 1<sup>st</sup> zone: eccentricity (En) = eccentricity of the cornea at 30° rounded up to the next 1/10
  - 2<sup>nd</sup> zone: begin with (-) standard flattening
- Orbiflex SMS: eccentricity (En) = eccentricity of the cornea at 30° rounded up to the next 1/10

Fitting advice see p. 28

### Product variations

Orthokeratology  
Myopia Prevention

### Variant name

OK  
RelaxFlex



### More information at page

p. 26  
p. 27


**Boriflex SA**

**Boriflex S2A**

## Technical data

$\varnothing_T$	Total diameter	7.50 to 12.00 mm
$r_0$	Base curve	6.00 to 9.00 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
En	Eccentricity	0.10 to 0.90 (depending on geometry)
Add	Addition	+0.50 to +4.00 dpt
Zoc	Central optical zone	1.00 to 4.50 mm
	Position	Centre near vision  Peripheral near vision 

Modifiable secondary parameters, see p. 32

## Geometry

- Spherical back optic zones
- Progressive spherical front optic zone in Bifocal (Bf) / Simple progressive (Sp)

Boriflex SA / ASP

- 1 aspheric flattenings

Boriflex S2A

- 2 aspheric flattenings

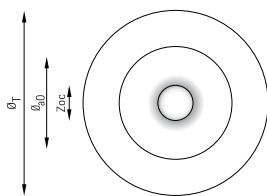
Boriflex SMS

- 3 spherical flattenings

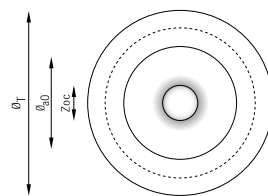
## Flattening

see Orbiflex

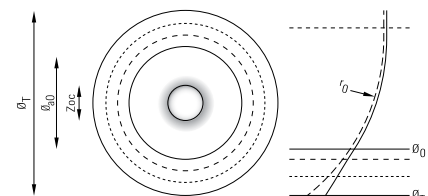
Boriflex SA /ASP



Boriflex S2A



Boriflex SMS



## First contact lens choice

- For geometry choice see Orbiflex.
- For current RGP wearer use same geometry as used
- For new fittings use first Boriflex S2A to ensure better translation of the optical zones.

Fitting advice and recommendation of the multifocal system see p. 30

# Gas permeable toric contact lenses

## Toriflex

### Toriflex BT

### Toriflex TP

#### Technical data

$\varnothing_T$	Total diameter	8.00 to 10.00 mm
$r_0$	Base curve ( $r_{0fl}$ = flat BC / $r_{0f}$ = steep BC)	6.00 to 9.00 mm
$\Delta r$	max. delta roflat-rosteep (BT)	1.50 mm
$F'_V$	Sphere	-30.00 to +20.00 dpt
	Cylinder (TP)	-0.25 to -8.00 dpt
	Axis (TP)	0° to 180°
$\Delta F'_a$	max. delta from spherical meridians on front surface (BT)	8.00 dpt
$l_{EA}$	Flattening	Standard (Std) / (-) / (+)
$\Delta$	Prism (TP)	1.50 (Std) or 2.00

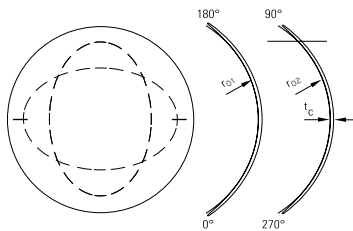
Modifiable secondary parameters, see p. 32

#### Geometry

- 1 aspherical flattening

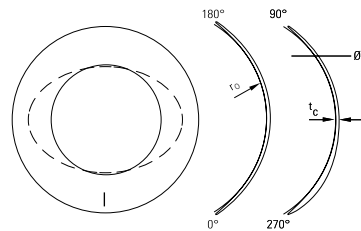
##### Toriflex BT

- toric back surface
- compensating front surface
- Marking at 0° and 180°



##### Toriflex TP

- spherical back surface
- toric prismatic front surface
- Marking at 270°



#### First contact lens choice

##### Geometry choice

- Bitoric (BT)  $\Delta r_{cfl} - r_{cst} \geq 4/10$  mm
- Front toric prismatic (TP)  $\Delta r_{cfl} - r_{cst} < 4/10$  mm

##### Diameter

- $\varnothing_T = 9.50$  mm

##### Base curve and power ( $F'$ @ Vertex power = 0 mm)

##### Bitoric (BT):

If astigmatism rectus (flat K Axis @ 0°/180° ± 30°)

- $r_{0fl} = r_{cfl} - 0.05$  /  $r_{0st} = r_{cfl} + 0.05$
- $F'_{afl} = \text{Sph} - 0.25$  dpt
- $F'_{ast} = \text{Sph} + (-\text{Cyl}) + 0.25$  dpt

If astigmatism invesus (flat K Axis @ 90° ± 30°)

- $r_{0fl} = r_{cfl} + 0.05$  /  $r_{0st} = r_{cfl} - 0.05$
- $F'_{afl} = \text{Sph} + 0.25$  dpt
- $F'_{ast} = \text{Sph} + (-\text{Cyl}) - 0.25$  dpt

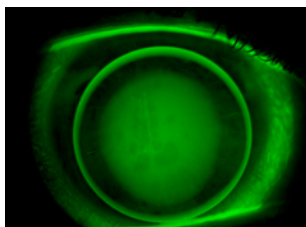
If astigmatism obliquus (flat K Axis @ 135° ± 15° / 45° ± 15°)

- $r_{0fl} = r_{cfl} / r_{0st} = r_{cst}$
- $F'_{afl} = \text{Sph}$
- $F'_{ast} = \text{Sph} + (-\text{Cyl})$

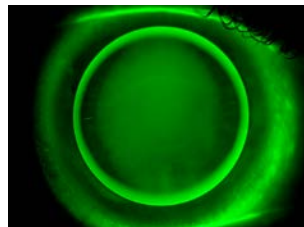
Front toric prismatic (TP):

- $r_0 = r_{cfl} - 0.05$
- $F'_V$ :  $\text{Sph}_{KL} = \text{Sph} - 0.25$  dpt  
 $\text{Cyl}_{KL} = (-\text{Cyl}) + (r_{cfl} - r_{cst}) * 5$   
 $A^\circ_{KL} = A^\circ_{\text{Brille}}$

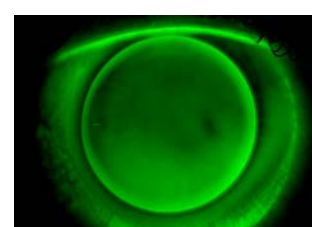
too steep



optimal fit



too flat



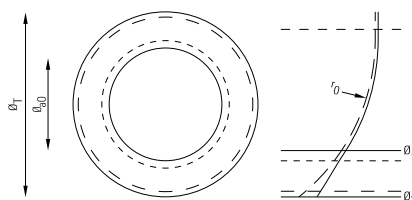
#### Technical data

$\varnothing_T$	Total diameter	7.50 to 12.00 mm
$r_0$	Base curve	5.70 to 9.00 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
Add	Addition	+0.50 to +4.00 dpt
Zoc	see Boriflex page 23	

Modifiable secondary parameters, see p. 32

#### Geometry

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>• Spherical back optic zones</li> <li>• 3 spherical flattenings</li> </ul> | <p>FlexCone</p> <ul style="list-style-type: none"> <li>• Spherical front optic zone</li> </ul> | <p>FlexCone Progressive</p> <ul style="list-style-type: none"> <li>• Spherical front optic zone</li> <li>- Bifocal (Bf)</li> <li>- Simple progressive (Sp)</li> </ul> |
|---|--|---|



#### First contact lens choice

We suggest to use our trial set.

##### Geometry choice

- Keratoconus grade 1 and 2, VA > 60% and / or keratometry > 6.5 mm: FlexCone K12
- Keratoconus grade 3 and 4, VA < 60% and / or keratometry < 6.5 mm: FlexCone K34

##### Diameter and base curve

- $\varnothing_T = \varnothing \text{ cornea} - 2.00 \text{ mm}$  (Standard 9.20)
- $r_0 = (r_{cfl} + r_{cst}) / 2$
- $F'_V = \text{eyeglasses sphere (Vertex power} = 0) - (r_{cfl} - r_0) * 5$

##### Advice

- Increase diameter according to cone position.
- If the contact lens is too flat or too steep in centre: modify  $r_0$  accordingly.
- If the contact lens is too steep in periphery with k12 change to k34. If it's too flat with K34 change to K12. Keep the same  $r_0$ .
- If the fitting is not optimal change to SXS.
- Order the definitive contact lens on line using the form "Back surface design".

##### Progression system and central optic zone (Zoc)

See Boriflex page 23

Fitting advice and recommendation of the multifocal system see p. 30

**FlexMed****FlexMed P**

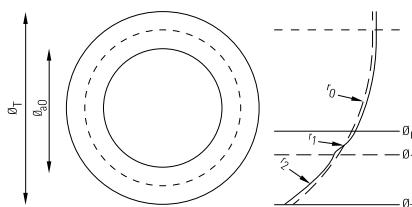
## Technical data

$\varnothing_T$	Total diameter	7.50 to 12.00 mm
$r_0$	Base curve	5.70 to 9.00 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
Add	Addition	+0.50 to +4.00 dpt
IEA	Flattening	2 customisable peripheral zones
Zoc	See Boriflex page 23	

Modifiable secondary parameters, see p. 32

## Geometry

- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>• Spherical back optic zones</li> <li>• 2 spherical flattenings (IEA / IER negativ)</li> </ul> | <p>FlexMed</p> <ul style="list-style-type: none"> <li>• Spherical front optic zone</li> </ul> | <p>FlexMed Progressive</p> <ul style="list-style-type: none"> <li>• Front optic zone             <ul style="list-style-type: none"> <li>- Bifocal (Bf)</li> <li>- Simple progressive (Sp)</li> </ul> </li> </ul> |
|---|---|--|



## First contact lens choice

We suggest to use our trial set

**Diameter and base curve**

- $\varnothing_T$  = corneal diameter - 1.50 mm (9.80 mm Standard)
- $r_0$  (topography) =  $r_{cf}$
- Power  $F'_V$  = eyeglasses sphere (Vertex power = 0)

**Flattening**

Can be adjusted individually with the online «back surface design» tool.

**Advice**

- If the adaptation is not satisfactory, try Orbiflex SxS for fine tuning
- Order the definitive contact lens on line using the form "Back surface design"

**Progression system and central optic zone (Zoc)**

See Boriflex page 23

Fitting advice and recommendation of the multifocal system see p. 30



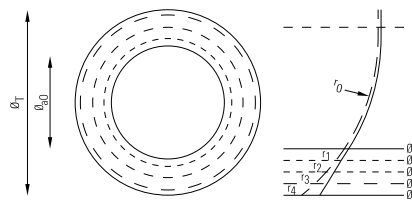
### Technical data

$\varnothing_T$	Total diameter	7.50 to 12.00 mm
$r_0$	Base curve	5.70 to 9.00 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
Add	Addition	+0.50 to +4.00 dpt
$\varnothing_0$	Diameter of central optical back surface	5.00 to 9.00 mm
$\varnothing_{1...}$ $\varnothing_n$	Diameters of flattening zones	
$r_{1...}$ $r_n$	Peripher back surface curves for flattening	
Zoc	see Boriflex page 23	

Modifiable secondary parameters, see p. 32

### Geometry

- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li>• Spherical back optic zone</li> <li>• Spherical flattening (1 to 4) custom made</li> </ul> | Orbiflex SXS<br>• Spherical front optic zone | Boriflex SXS<br>• Front optic zone<br>- Bifocal (Bf)<br>- Simple progressive (Sp) |
|--|--|---|



### First contact lens choice

#### Diameter and base curve

We suggest to use our trial set (Orbiflex S3S / FlexCone / FlexMed)

- Choose  $\varnothing_T$
- Choose the number of flattening zones (1 to 4)
- $r_0$  (Topography)
- Power  $F'_V$

#### Flattening

- $\varnothing_{a0}$ ,  $r_{1...}$   $r_n$  and  $\varnothing_{1...}$   $\varnothing_n$  customisable according to topography

#### Advice

- Order the definitive contact lens on line using the form "Back surface design"

#### Progression system and central optic zone (Zoc)

See Boriflex page 23

Fitting advice and recommendation of the multifocal system see p. 30

**Orbiflex-OK**

## Technical data

$\varnothing_T$	Total diameter	7.50 to 12.00 mm
$r_0$	Base curve	6.00 to 9.00 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
En	Eccentricity	0.10 to 0.90 (depending on geometry)

Modifiable secondary parameters, see p. 32

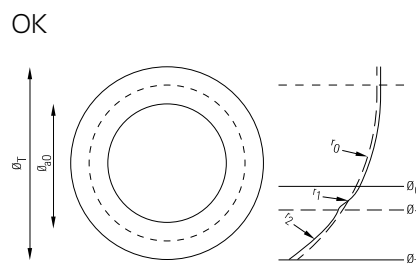
## Geometry

- Spherical front and back optic zones. Reverse back curve and Aspheric landing zone

## Flattening

Orbiflex OK or as Orbiflex OK Relax

- spherical zone comparing the myopia
- reverse zone depending on  $r_0$  and  $r_C$
- aspherical landing zone  $r_C$  and En



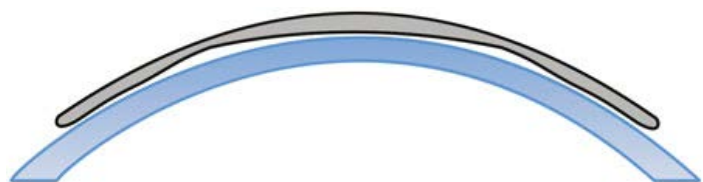
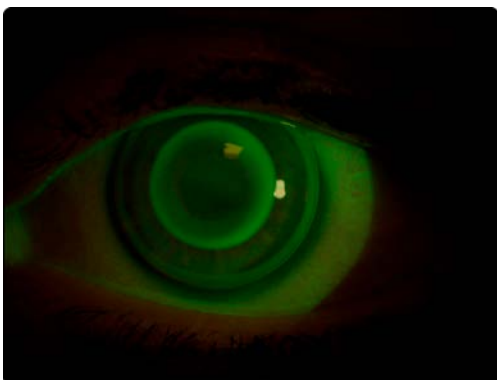
## First contact lens choice

For the fitting of the Orbiflex-OK, we recommend to use our Online Fitting Assistant  
 For the adjustment for the Relax optical Zone, we recommend to use our Online Toolbox.  
[www.swisslens.ch/toolbox](http://www.swisslens.ch/toolbox)

## Diameter and base curve

Orbiflex OK

- $\varnothing_T = \varnothing_{\text{Cornea}} - 1.00 \text{ mm}$
- Curves = calculation VLF



**Relax**

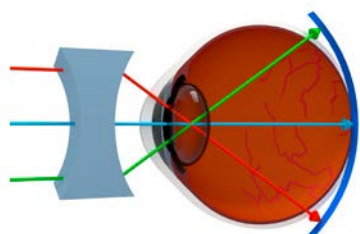
### Technical data

$\varnothing_T$	Total diameter	7.50 to 12.00 mm
$r_0$	Base curve	6.00 to 9.00 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
En	Eccentricity	0.10 to 0.90 (depending on geometry)

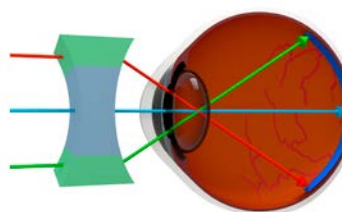
Modifiable secondary parameters, see p. 32

### Geometry

- Spherical back optic zones
  - Progressive spherical front optic zone in Bifocal (Bf) / Simple progressive (Sp)
- This new optical design adjusts peripheral aberrations allowing a full and un-distorted clear image to fall on the retina, allowing the patient comfortable vision in the near.
- The lens geometry is of a center distance multifocal design, enhanced with a special polynomial progression in the periphery.



unifocal defocus retinal image



retinal image with Relax

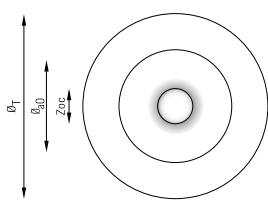
Orbiflex Relax SA  
• 1 aspheric flattening

Orbiflex Relax S2A  
• 2 aspheric flattenings

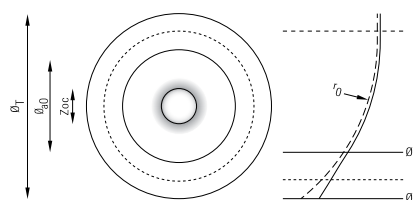
### Flattening

see Orbiflex

SA



S2A



### First contact lens choice

- For geometry choice see Orbiflex.
- For current RGP wearer use same geometry as used
- For new fittings use first Orbiflex S2A to ensure better translation of the optical zones.
- Fitting is identical to a unifocal contact lens
- Adjustment period for the patient will usually be about 1-2 weeks (e.g. halos)
- Slightly reduced distance VA's may occur at the beginning
- Best results with myopic children, teenagers, young adults and esophoric pre-presbyopic adults with a lack of accommodation and a visual stress at near.

Fitting advice see p. 30

**AirFlex**

## Technical data

$\varnothing_T$	Total diameter	14.90 or 15.50 mm
$r_0$	Base curve	5.50 to 10.00 mm
$F'_V$	Sphere	-40.00 to +40.00 dpt
	Cylinder	-0.25 to -6.00 dpt
	Axis	0° to 180°
Add	Addition	+0.50 to +4.00 dpt
En	Eccentricity	0.00 to 1.20
J-index	Soft skirt (J-index)	J - 0.50 to +1.00 (standard J 0.0)
Material	Soft skirt	Silicone Hydrogel 50%, Filcon V3 (colorless)
	RGP central zone	Optimum Extra, Roflufocon D (blue)
Zoc	Siehe Boriflex S.21	

## Geometry

AirFlex hybrid lenses are next generation hybrid contact lenses that consist of :

- a central zone made of a high Dk RGP material, for excellent vision
- a soft peripheral skirt made of a Silicone Hydrogel material, for easy fitting and comfort

## Spheric

- spherical back surface with aspherical flattening
- Uni- or multifocal with spherical optical zone on the front surface

## Bi

- toric back surface with aspherical flattening
- Uni or multifocal with torical optical zone on the front surface
- Ballast stabilisation

## Ext

- spherical back surface with aspherical flattening
- Uni- or multifocal with toric optical zone on the front surface
- Multi-dynamic stabilisation

## Int

- toric back surface with aspherical flattening
- Uni- or multifocal with spherical optical zone on the front surface
- Ballast stabilisation

## Fitting protocol

The fitting protocol depends on whether you fit regular or irregular corneas.

Please note:

- the standard lens diameter ( $\varnothing_T$ ) is always 14,90 mm for both, regular and irregular corneas
- the standard skirt (J-index) is always J 0.0 for both, regular and irregular corneas
- the standard diameter of the RGP part ( $\varnothing_{RGP}$ ) with irregular corneas (eg. keratoconus) is 8,50 mm.
- the standard diameter of the RGP part ( $\varnothing_{RGP}$ ) with regular corneas is 10,00 mm.
- for corneal astigmatism > 4.00 dpt or internal astigmatism > 0.75 dpt a toric design will be recommended

For the most irregular corneas we recommend to use a "trial RGP" with  $\varnothing_T$  9,50 mm in order to Determine the Base curve:

**Total Diameter:** = the standard lens diameter ( $\varnothing_T$ ) is always 14,90 mm

**Base Curve** = BC ( $r_0$ ) = Kflat (radius of flattest K reading) or Base Curve of "trial RGP"

**Power:** Eyeglasses sphere (Vertex power = 0) - (Kflat -  $r_0$ ) \* 5

**Addition:** Addition from glasses

**Zoc, Position:** Dominant Eye CD, Non-Dominant CN

**Flattening:** the standard skirt (J-index) is always J 0.0 for both, regular and irregular corneas

## AirFlex

### Assess the fit

#### Control visual acuity:

If visual acuity is insufficient, perform a spherical over-refraction and compensate for Vertex distance to determine final lens power.

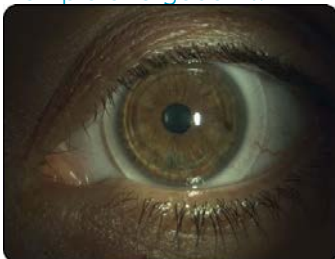
#### Evaluate the fit during a slit lamp exam:

As in soft contact lens fitting, the evaluation is based on

1. Centration
2. Mobility
3. Fluorescein at lens removal

Verify the alignment of the lens using large molecule fluorescein. Never use fluorescein for RGP lenses as this may damage the hybrid lenses..

#### Example of a good fit:



Centration is good:  
The lens covers the entire corneal surface

Mobility is good:  
The lens moves easily about 0,25 mm with each blink

#### Too steep fit



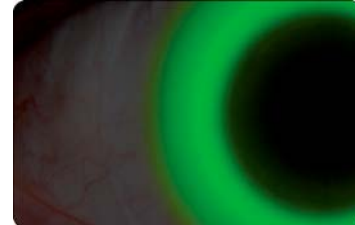
- Increase BC by 0,10 mm
- Add + 0,50 dpt to lens power

#### Good fit



The Base Curve is optimal.  
There is little or no fluorescein in the central zone and an arc of 1 to 2 mm of fluorescein at the junction.

#### Too flat fit



- Decrease BC by 0,10 mm
- Add -0,50 dpt to lens power

#### What if either centration or mobility is non-satisfactory?

Steepen or flatten the skirt. 4 skirts are available:



- Very flat skirt: J + 1.5 / +2.0
- Flat skirt: J + 0.5 / +1.0
- Standard skirt: J 0.0
- Steep skirt: J - 0.5 / -1.0
- Very steep skirt: J -1.5 / 2.0

#### Final control

In case of satisfactory observations, check the fit of the lens after 1 month of wear and at the end of the day. Lens power = Fv of RGP + over-refraction + Vertex distance

Further information, videos and pictures for adaptation and handling under:  
[www.swisslens.ch/AirFlex](http://www.swisslens.ch/AirFlex)

**Sclera**













## Technical data

$\varnothing_T$	Total diameter	15.00 mm
$r_0$	Sagittal height	3500 to 540 micron
$F'_V$	Sphere	-25.00 to +25.00 dpt
	Cylinder	-0.25 to -6.00 dpt
	Axis	0° to 180°
P.Tor	peripher Torus	0.1 to 0.6
Elift	Edgelifit	0 / - / +
Material		Optimum Extra, Roflufocon D (blue or White)

ScleraFlex - the contact lens for fitters looking for an easy to fit to more complex cornea. ScleraFlex offers excellent initial comfort whilst providing outstanding visual acuity

## Fitting protocol

The ScleraFlex have to be fitted empirically as keratometry and topography do not give a good indication of sagittal depth. However, the first trial lens can be chosen based on the eye condition to be fitted. Then choose number 2 of this group.

Condition	SAG	Code
Very Flat K's	3.500	 1
Very Shallow AC	3.625	S  2
	3.750	 3
Normal Eyes	3.900	 1
Early Keratoconus	4.025	M  2
Early Pellucid	4.150	 3
Moderate Keratoconus	4.275	 1
Moderate Pellucide	4.400	L  2
Protruding Graft	4.525	 3
Severe Keratoconus	4.650	 1
Severe Pellucid	4.775	XL  2
Very Protruding Graft	4.900	 3

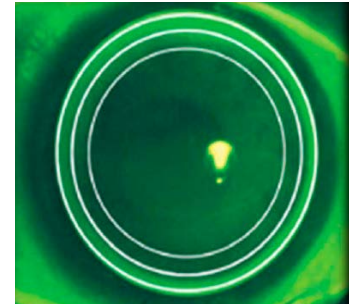
**Insertion**

Lenses must always be inserted full to the brim with saline. Fluorescein must be added to the bowl of the lens prior to insertion as it will not get behind the lens after insertion.

The patient should be bent forward with their nose pointing towards the floor and their chin tucked in. The lens can either be supported on a tripod of three fingers or on a DMV inserter.

## Geometry

1. Insert trial lens for a minimum duration of 30 minutes. Ask patient to focus to the floor to minimise the foreign body sensation.
2. Evaluation of the subjective comfort.
3. Over-refraction
4. Slit lamp examination:
  - Dynamic evaluation with diffuse illumination:
    - Eye in primary gaze and blinking normally.
    - Movement (speed) and position after blink and during eye movements:
      - Vertical movement
      - Horizontal movement
      - Centration
      - A good fitting lens will be evenly centered on the cornea ( $\pm 0.5$  mm)
      - The movement should be pronounced but not too big (1-2 mm)
  - Static evaluation with fluoroscopy:
    - Evaluation when patient is looking straight ahead and the lens is centered on the cornea without impact of the eyelids on the lens: Evaluation of the tear film thickness under the lens  
Tearfilm  $< 10\mu\text{m}$  = no floresceinis visible
      - a) central optic zone with alinement fluorescein pattern
      - b) inter-peripheral zonewit small amount of fluorescein
      - c) peripheral zone with a band of increased fluorescein how will be needed for a good tear film exchange



### Advice for Toriflex

The optimal fluorescein pattern shows a small fluor lake in the center and a larger fluor ring in the periphery (env. 0.75 mm).

Vertical movement should be around 1 mm. In case of too much movement, decrease both central back curves ( $r_{Ofi}$  and  $r_{Ost}$ ) with  $-0.10$  mm. In case of low riders increase both central back curves ( $r_{Ofi}$  and  $r_{Ost}$ ) with  $+0.10$  mm or in case the upper lid is pushing the lens down, increase the total diameter  $\varnothing_T$ .

In case of high riders, decrease total diameter  $\varnothing_T$

For Toriflex TP only:

In case of instable stabilisation and/or high riders, increases the prism to 2.0 cm/m.

Attention: the stabilisation prism induce an optical prism. This should be adjusted on both eyes.

## Progression system and central optic zone (Zoc)

Determine if the vision is alternate (change of optic zones by translation) or simultaneous (change of optic zones by visual cortex selection)

- Alternate vision: reading zone in periphery (most of the cases)
- Simultaneous vision: reading zone in centre

Requirements	Bf ☉ Bifocal	Sp ☉ Simple progressive
Addition $< 1.75$ dpt	√	
Addition $\geq 1.75$ dpt		√
Priority in distance vision	√	
Priority in near vision	dominant eye	non dominant eye
Good contrast	√	

- Distance vision depends on centering, near vision on the movement (translation).
- For a good translation a movement from 1 to 2 mm is needed. It is affected by  $rO$  and  $\varnothing_T$ .
- The fluoroscopy must show good optic zone alignment.

	☐ Bf ☐		☐ Sp ☐	
	Centre near	Periphery near	Centre near	Periphery near
Dominant eye	2.25	3.75	2.50	4.00
Non dominant eye	2.75	3.25	3.00	3.50
Undefined	2.50	3.50	2.75	3.75

	Optimum Extra Roflufocon D	Boston XO Hexafocon A	Optimum Comfort Roflufocon C	Boston EO Enflufocon B	Paragon HDS	Paragon Thin Paflufocon C	Contapem F2 Focon III 2	Optimum Classic Roflufocon A	Boston ES Enflufocon A	Hydro-Sil GP Onsifacon A
DK Fatt / ISO (9913-1)	100*/75**	100*/75**	65*/49**	58*/44**	53*/40**	31*/23**	28*/21**	26*/19,5**	18*/15**	56*
Manufacturer	Contamac	Polymer technology	Contamac	Polymer technology	Paragon	Paragon	Contamac	Contamac	Polymer technology	Lagado
Wettability angle	3° <sup>3</sup>	49° <sup>2</sup>	6° <sup>3</sup>	49° <sup>2</sup>	14.7° <sup>3</sup>	12.8° <sup>3</sup>	19° <sup>3</sup>	12° <sup>3</sup>	52° <sup>2</sup>	7.2° <sup>3</sup>
Refractive index	1.431	1.415	1.437	1.429	1.449	1.437	1.46	1.45	1.443	1.452
Hardness <sup>4</sup>	75	79.3	79	83	84	85.3	83	83	85.4	86
Tint	clear blue green	blue / red green violett	blue green	blue	blue green	blue green	clear	blue green	blue iceblue green	blue
UV	√	√	√	√	√	√	√	√	√	√
Durability	++	++	+++	++	++	+++	+++	+++	+++	++
Resistance to deformation <sup>5</sup>	++	++	++	++	++	++	++	+++	+++	+
Long term wearing	+++	+++	++	++	++	+	+	+	+	++
Tear film with lipid	+	+	++	++	++	++	++	++	+++	+
Tear film with protein	+	+	++	++	+	++	++	++	+++	+
Usage as standard material	+	+	++	++	++	+++	+++	+++	+++	+
Usage for special thin lens design	+	+	++	+	+	+++	+++	+++	+++	+
Wetability	++	++	++	++	++	++	++	+++	+++	+++

GP-Therapy colours	SLF 460	SLF 535	SLF 580
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\*  $\times 10^{-11}$  (cm<sup>2</sup>/sec) [ml O<sub>2</sub>/(ml  $\times$  mm Hg)]

\*\* $\times 10^{-11}$  (cm<sup>2</sup>/sec) [ml O<sub>2</sub>/(ml  $\times$  hPa)]

<sup>2</sup> Wettability angle = CLMA method

<sup>3</sup> Receding contact angle (DCA)

<sup>4</sup> Shore D

<sup>5</sup> Corneal astigmatism



Material and Colour availability depends on the contact lens type.

Default material: Optimum Classic blue

### Quality assurance

These materials are in conformity with the standard ISO 10993-1 defining the biocompatibility of materials. SwissLens manufacturing process warrants this biocompatibility even after the manufacturing process, in particular without adding polish material. This standard is required by the quality assurance System of SwissLens



	$\varnothing_{a0}$ Optical zone diameter	$l_{EA}$ Flattening	$t_c$ Center thickness modification	$t_{ER}$ Border curve (thickness of border)	LB Bumps lenght	HB Bumps height
Reasons of the paramter modification	Halo reduction or contact lens thickness	Modification of the peripheral seat	Rigidity and durability contact lens. Acuity improvement	Rigidity and durability of the contact lens. Improvement of the resistance to breakage	Action on stabilisation in case of large or small eyelid aperture	Action on stabilisation in case of strong or weak eyelid tension
Orbis	7.00 to 9.00 mm	- Standard - - moncurve + strong	-0.03 to +0.20 mm			
Toris Ext Toris Int					√	√
Toris Bal						√
Borelis						
Torelis Ext Torelis Int					√	√
Torelis Bal						√
HydroCone	5.00 to 7.50 mm		see page 10	0.08 to 0.16 mm  Standard: - Hydrogel 0.10 mm - SiH 0.12 mm	√	√
HydroMed		see page. 11	see page 11		√	√
Orbiflex	SA: 7.00 to 8.00 mm	- Standard + stark				
Boriflex	S2A: 6.00 to 8.00 mm					
	S3S: 7.00 to 8.60 mm					
Toriflex	6.00 to 8.00 max. $\varnothing_T$ - 2mm	(Std) Standard - standard + strong	-0.03 to +1.00 mm			
FlexCone						
FlexMed	5.00 to 7.50 mm	see page 24				
Orbiflex SxS Boriflex SxS		see page 25				

## Options on request

- Serial number (SN) engraving
- Right contact lens marking

### Open account

SwissLens supplies its products and services only to qualified optical professionals. An account has to be opened with SwissLens before ordering our products and services. The necessary form is available under [www.swisslens.ch/contact/new-customer](http://www.swisslens.ch/contact/new-customer).

### Order by Internet

[www.swisslens.ch/order](http://www.swisslens.ch/order)

If you are a SwissLens customer and don't have an Internet account please use our contact form to obtain one ([www.swisslens.ch/contact/access-request](http://www.swisslens.ch/contact/access-request)). On our PRO site, we offer a online assistant (vlf) to calculate your first trial lens.

We offer an online file upload to send us patients details as topography and images under: [www.swisslens.ch/contact/upload-file](http://www.swisslens.ch/contact/upload-file).

### Order by Email

[lens.order@swisslens.ch](mailto:lens.order@swisslens.ch)

### Order by fax

+41 21 620 06 65

### Order by phone

**Switzerland and International**

+41 21 620 06 66

**Great Britain**

0844 381 4146

### Information about SwissLens

For all requests, please use our contact form on our website [www.swisslens.ch/contact](http://www.swisslens.ch/contact) or by email: [lens.order@swisslens.ch](mailto:lens.order@swisslens.ch)

Opening hours of our customer services are available on [www.swisslens.ch/experts/](http://www.swisslens.ch/experts/)

## 1 Introduction

SwissLens is subject to medical device legislation imposed by CE marking, and as such, every practitioner of SwissLens must take notice of the content of the conditions of purchase and delivery. By ordering SwissLens products, the buyer automatically accepts these general terms and conditions.

## 2 Production and delivery delays

### Made to measure contact lenses

Production: 1 to 3 working days.

Urgent orders (additional charges apply): manufacturing on the same day if orders are submitted before 10:00 a.m.; manufacturing the following working day for orders after 10:00 a.m.

Delivery times:

Switzerland: 1 working day

Europe: 2 working day

### Disposable contact lenses and cleaning solutions

Delivery times: 2 to 7 working days

### Colour lenses, prosthetic lenses, AirFlex and Toriflex:

Delivery times: 2 to 3 weeks

## 3 Invoice

Each SwissLens client receives a detailed invoice, including current credits and discounts. If the amount due is negative or smaller than Euro/CHF 20.00, the amount is automatically carried over to the following invoice. No refunds on credits are permitted.

Each product remains the property of SwissLens until payment is received.

## 4 Payment

Payments are due within 30 days of invoice. Late payments incur charges (see price list). SwissLens reserves the right to terminate delivery if an account is in excess of 30 days

## 5 Credits

Credits are automatically calculated in invoices. The client cannot deduct any additional amounts.

### Made to measure contact lenses

The contact lenses can be returned online. The reception and the handling of credit can lead to delays before they appear on invoices.

### Disposable contact lenses and cleaning solutions

No returned is accepted except for guarantee.

## 6 SN Serial Number

Each made to measure contact lens produced by SwissLens is marked with a specific serial number that appears on labels, delivery note and credits. SwissLens archives all information pertaining to the contact lenses by serial number.

In order to guarantee optimum reproducibility when ordering renewals, please indicate the serial number of the fitting lens or the lens to be re-ordered.

## 7 Contact lenses renewals SL6 and SL3

By ordering made to measure contact lenses with 6 monthly or 3 monthly renewal, the fitter is committed to offering them only for the duration specified when ordering, and to actively follow up the renewal. Each vial specifies the life span of the contact lens it contains. In order to facilitate renewal follow-up, SwissLens provides a renewal reminder on-line. SwissLens reserves the right to discontinue deliveries in case of infringement of these renewal conditions.

## 8 Packaging

### Soft made to measure contact lenses

Soft contact lenses produced by SwissLens are hydrated, sterilised and delivered in a special solution. Sterilisation is no longer guaranteed after opening or damaging of the closing security system. Consequently, the contact lens may not be used if a defect is detected in the vial (break, crack, inclusion) or the solution appears not perfectly clear.

The defective contact lens should be returned unused to Swisslens, whereupon it will be replaced without delay.


### Gas permeable made to measure contact lenses RGP

Gas permeable contact lenses are professionally cleaned and then packed in special packaging for delivery purposes only. It is imperative to clean the contact lens before it is first fitted.

### Disposable contact lenses and cleaning solutions

If a defect is detected in the packaging system, the product must not be used and must be returned to SwissLens

## 9 Expiry

The expiry date of the product is indicated on the label next to the symbol . This date is only valid as long as the packaging system is intact.

The product must be destroyed after expiry of this date.

## 10 Miscellaneous

SwissLens offers its products for sale only to authorised persons, practices and shops according to the country-specific legislation. Distributors are not authorised to sell SwissLens products to non-authorised third parties. Resale on the Internet is not tolerated and will be prosecuted. The practitioner must have at least one personal contact with the end customer in order to inform him/her of the precautions necessary in regards to the handling and wearing of SwissLens products. The practitioner is obliged to pass on to their clients all necessary information and recommendations relating to the use and care of SwissLens products as well as the information notice published by SwissLens.

The practitioner is also obliged to inform SwissLens about all incidents and complaints in regards to their products. This information should be as detailed as possible and be transmitted to the company with minimal delays, together with the faulty products.

All documentation concerning the products and their use must be stored in order to guarantee long term support.

In order to conform to medical device legislation (CE marking), the practitioner must preserve the traceability of products in stock or worn by his/her clients.

For France:




A made to measure contact lens that has been in contact with a client who is infected or at risk of being infected with CJD (Creutzfeldt-Jakob disease) must be returned to SwissLens with a comment that specifies this.

Prilly 2015



SwissLens SA  
Chemin des Creuses 9  
CH-1008 Prilly

Tel: +41 (0) 21 620 06 66  
Fax: +41 (0) 21 620 06 65  
✉ [lens.info@swisslens.ch](mailto:lens.info@swisslens.ch)

 [swisslens.ch/facebook](https://www.facebook.com/swisslens.ch)  
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Version: SL\_Products\_2018en\_vic

