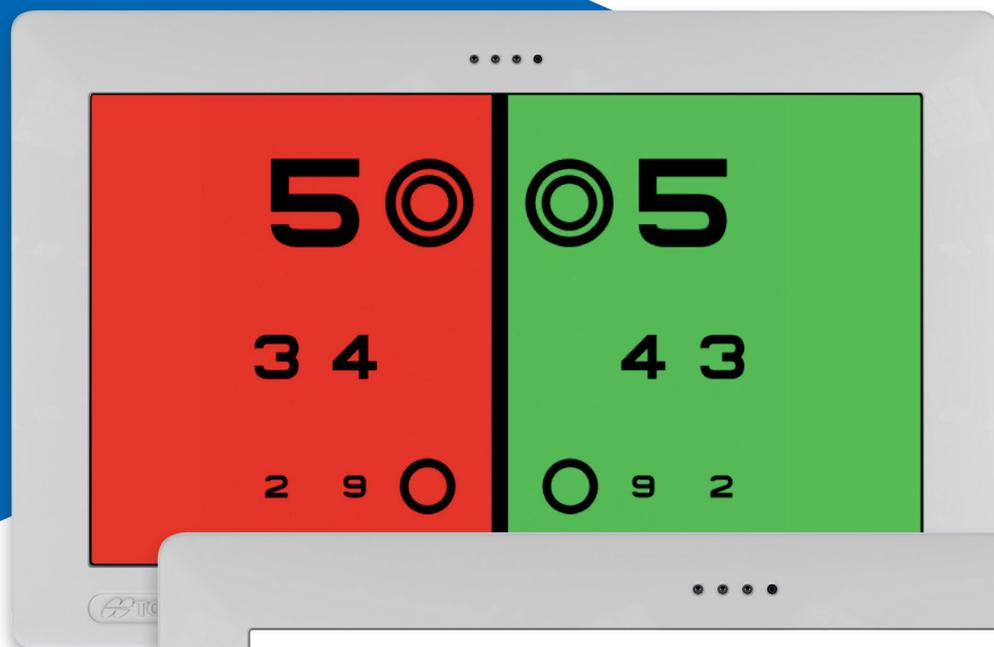


3 p.d. Optotipų demonstravimo monitorius

CC series

Computerized Chart systems



YOUR VISION. OUR FOCUS.

Computerized Chart systems

CC series

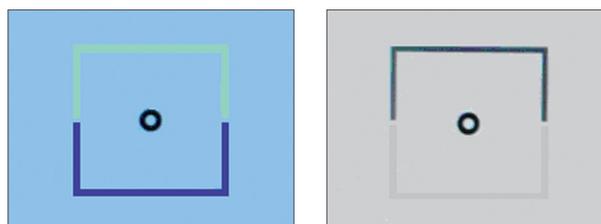
Topcon offers a wide range of Computerized Chart systems. With years of experience of providing software in the field of optics, Topcon offers a matching system depending on your wishes. Our software includes efficient and fully validated algorithms for measuring visual acuity. Topcon CC series chart systems can be operated as a stand-alone system due to a fully integrated Linux operated PC, or it can be integrated into the Topcon CV-5000S refraction lane.

CC-100XP

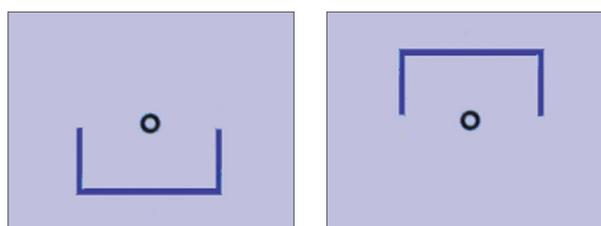
Topcon is proud to present the latest development in high-tech LCD test charts, the Topcon CC-100XP. The CC-100XP with LED technology is the top model of Topcon's chart system product line. All important visual acuity tests, binocular tests, color vision tests and contrast sensitivity tests are included. The most remarkable feature is the circular polarization technique used for binocular testing.

Circular polarization

Image separation for binocular testing is created through a specific polarization technique which is unique for visual acuity test LCD charts. This unique circular polarization technique provides 100% image separation, without any "ghost image" and provides equal background color. This is a significant improvement compared to all conventional linear polarized LCD chart systems currently available on the market.

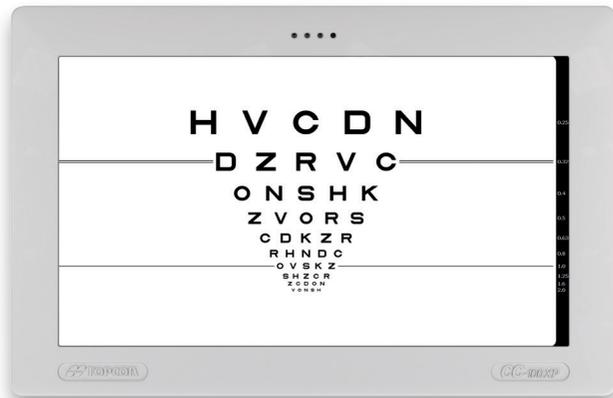


Ghost images and different background colors in conventional LCD chart systems



100% blocking and equal background colors in Topcon CC-100XP

CC-100 series



To ensure proper settings of the screen contrast and brightness, the CC-100XP is making use of the latest LED screen technology. The white Maddox LED provides a bright LED light source, which is extremely well fitted for Maddox testing. The CC-100XP is also able to determine if the environment illumination is correct by using a light sensor.

Key characteristics

- | Unique circular polarization
- | Available testing distance 2.9-6.1 m
- | Fully integrated Linux operated PC
- | Wide range of optotypes
- | Spatial frequency contrast sensitivity test
- | Pseudoisochromatic color vision test
- | MKH test sequence according to Haase
- | White Maddox LED light source
- | Fits seamlessly in the CV-5000S refraction lane



CC-100

The Topcon CC-100 features the same functionalities as the CC-100XP. However, the CC-100XP uses unique circular polarization while the CC-100 provides image separation through red and green technique. Therefore the CC-100 is the basic version of the CC-100XP.

The high resolution 21,5 inch LED screen, similar to CC-100XP, ensures a clear and bright chart display. All commonly known visual acuity tests are available, including an ETDRS test. Like the CC-100XP, the CC-100 displays reports of the color vision tests and contrast tests. The CC-100 series can be operated as a stand-alone with an infrared remote control, or integrated in the Topcon CV-5000S refraction lane.

Key characteristics

- | Image separation through red and green filters
- | Available testing distance 2.9-6.1 m
- | Fully integrated Linux operated PC
- | Wide range of optotypes
- | Spatial frequency contrast sensitivity test
- | Pseudoisochromatic color vision test
- | MKH test sequence according to Haase
- | White Maddox LED light source
- | Fits seamlessly in the CV-5000S refraction lane

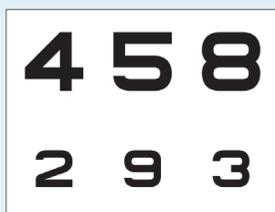
Visual acuity charts provided by CC-100 series

The Topcon CC series chart systems offer the most commonly used visual acuity optotypes ranging from letters, numbers, tumbling E, landolt C and up to five different children charts.

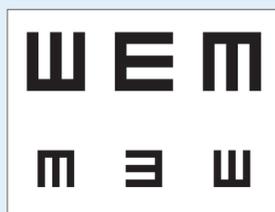
The chart systems support 20 different menu languages. The CC-100 series is also capable of displaying Cyrillic optotypes.



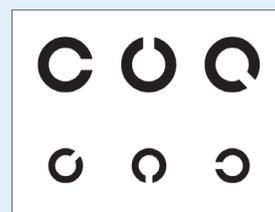
Letters



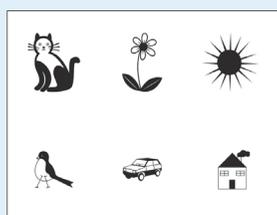
Numbers



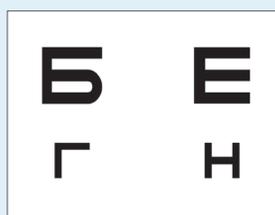
Tumbling E



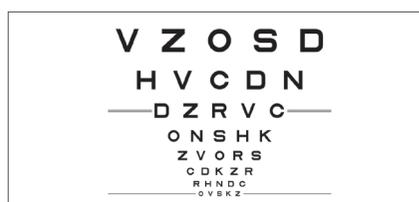
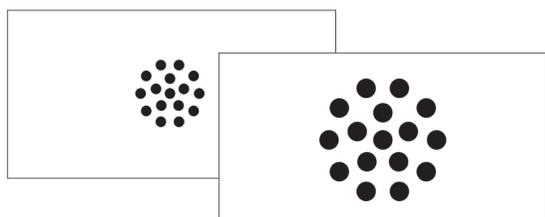
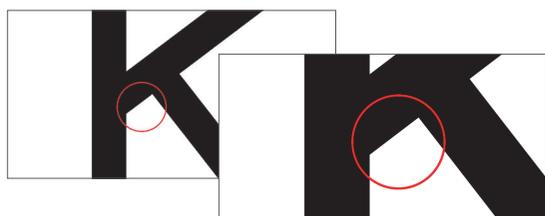
Landolt C



Illiterates and children charts
(5 different chart types)



Cyrillic optotypes



Resolution

Optotypes are rendered as vectorial graphics, keeping crisp and high resolution of low visual acuity optotypes.

3.6. p. Dalies optotipu rodymo (nereikalingu optotipu uzdengimo) galimybes:
Horizontali eilute;
Vertikali eilute;
Pavienis optotipas

Masking / Randomize

Masking is available for horizontal (row), vertical (column) and single characters. When masking is active, the system visualizes only the non-masked optotypes. All optotypes can be randomized and the initial optotype at start up can be programmed.

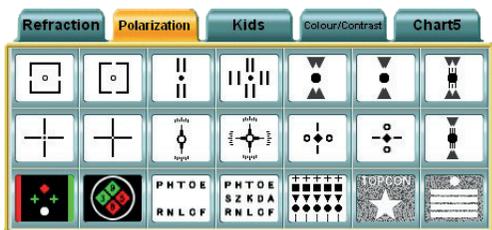
Scaling

Dots chart used for Cross Cylinder testing can be scaled according to the patient's visual acuity independent from working distance setting.

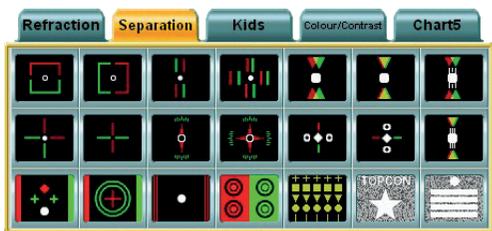
ETDRS test

ETDRS acuity testing is the worldwide standard for visual acuity testing in diabetic retinopathy studies. The ETDRS test is designed to eliminate inaccuracies in the Snellen and Sloan tests.

Additional tests provided by CC-100 series



Circular polarization separation tests of CC-100XP



Red/Green separation tests of CC-100

Measuring phoria compliant to MKH - Haase

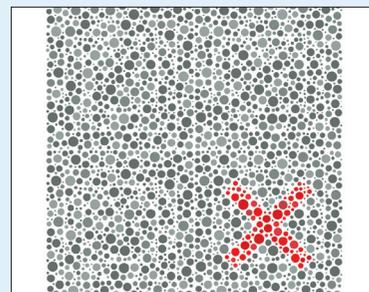
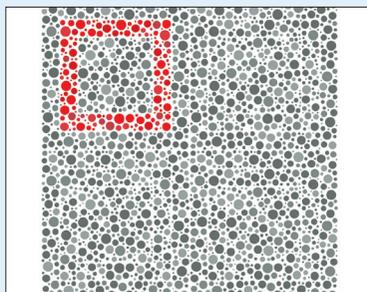
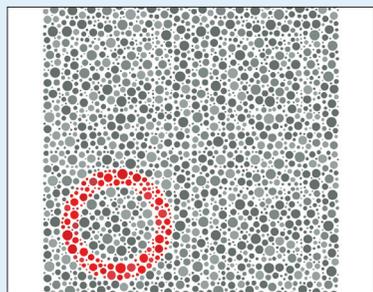
Unimpaired binocular vision is an important prerequisite for optimum vision. The methodology developed in this context is known as MKH (measuring and correcting methodology). The MKH-Haase method has been considered a reliable method for prescribing prisms to symptomatic binocular vision patients.

The MKH test measures associated phoria at distance and near using a sequence of different polarized test charts. MKH test sequence is available in the CC-100 series for testing phoria due to the variety of stereo separation tests available.

Pseudoisochromatic color vision test

The pseudoisochromatic test is based on the well-known HRR test, but provides better quantitative data on color vision deficiencies. The test includes several pseudoisochromatic plates, each composed

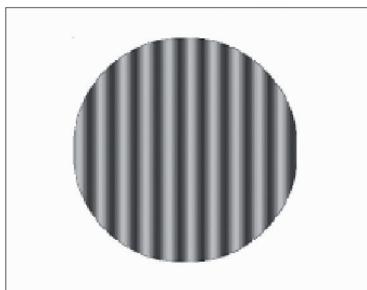
of a pattern of differently shaded dots. Within each pattern, a number or symbol is present. CC-100 series displays the results in a report showing various color perception deficiencies.



Spatial frequency contrast sensitivity test

The spatial frequency contrast sensitivity test can be customized by setting the amount of spatial frequencies and contrast levels.

The result gives valuable information about the patients contrast visual acuity. Test results are displayed in an easy to understand graph.



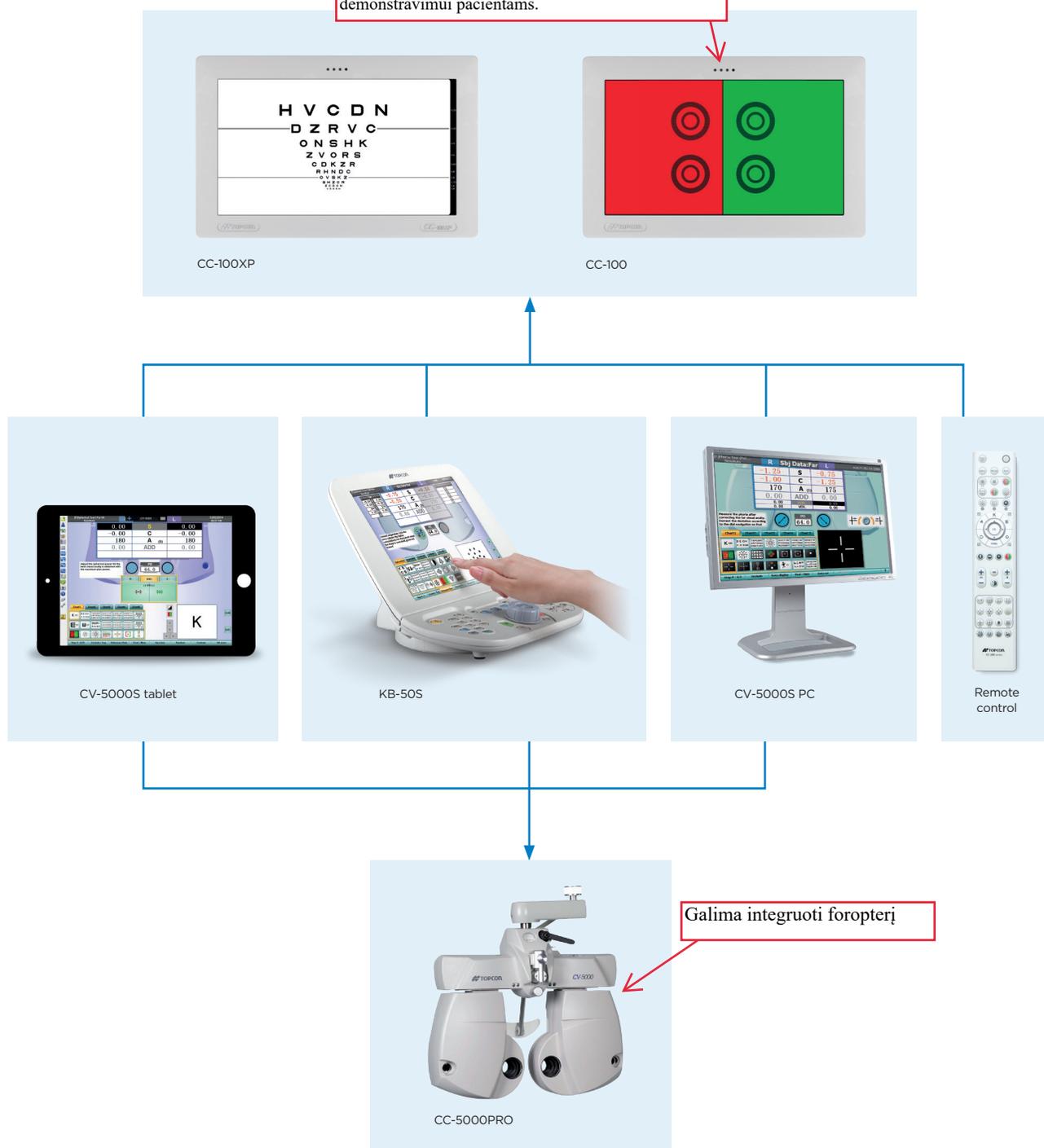
Various operation options

The Topcon CC-100 series chart systems can be operated in various ways. Operation can be done as stand-alone by remote control, with the KB-50S controller or with the CV-5000S PC controller

Galima integruoti foropterį

software in combination with Topcon's dedicated CV-5000PRO automated phoropter. The CV-5000S tablet controller provides a wireless operation of the CC-100 series as well.

3.1 p. pakabinamas ant sienos, skirtas optotipų demonstravimui pacientams.



Test charts information

	CC-100XP	CC-100
Testing distance	2.9 – 6.1 m, stepsize 0.1 m	3.2. p. Optotipų demonstravimo atstumas 2,9-6,1 m
Viewing area W x D (mm)	473 x 265	473 x 265
Visual acuity range / steps	Decimal: 0.05 to 2.0 LogMar: 1.3 to -0.30 Snellen (m): 120 to 3 Snellen (f): 400 to 10 Monoyer: 0.5 to 2.0	3.3. p. Regėjimo aštrumo įvertinimo trys skalės 0,05-3 m diapazone
VA test, compliant with ISO 8596	Landolt C	3.4. p. Optotipų pasirinkimas: Landolto C; Raidės; Skaičiai; E šakutės; ETDRS; Paveikslukai vaikams;
VA test, compliant with ISO 8597	Letters	
	Numbers	
	Tumbling E	
	Cyrillic*	
VA tests	5 Children charts ETDRS Monocular R/G Clock fan Astigmatism dots	
Binocular tests (image separation)	Schober test Worth test Color test Inversion test Sine wave contrast test Contrast modifying test Contrast sensitivity test Separation through RED - GREEN Circular polarization Duochrome balance test Cross test Cross test with fixation Zeigertest Double Zeigertest Coincidence test H&V with fixation VA balance test Indicator Double indicator Stereo test Stereo triangle 11 Stereo valenz 20 Differential stereo Vertical OXO-like Horizontal OXO-like Random dot (Topcon) Random dot (Stages) Cowen Fixation disparity test	3.5. p. Binokuliniai testai Schober Worth Pseudoizochromatinis-spalvinis; Pasikartojančių linijų kontrastinio jautrumo; Kryžiaus su fiksacija; Regėjimo aštrumo balanso; Zeiger Stereo Random dot Cowen
Other functionalities	Optotype masking Optotype randomize Scaling dots chart White Maddox LED	

* Only available with use of remote control

Specifications CC series

Electrical specifications		CC-100 series
Power supply		AC 100 – 240 V – 50 – 60 Hz
Power input		60 VA
Mechanical specifications		
Width		60 mm
Height		360 mm
Length		560 mm
Weight		5.6 kg
Controllers		
CV-5000S	3.8 p. Valdymas Infraraudonųjų spindulių pultelio pagalba	- Infrared remote control - KB-50S - CV-5000S PC - CV-5000S tablet
Operation		
Temperature		10°C to 40°C
Relative humidity		8% to 75% (no condensate)
Atmospheric pressure		700 hPa to 1060 hPa
Integrated PC components		
Operation system		Linux Custom Image
Processor		Freescale Cortex A9
RAM		512 MB
Hard disk		512 MB SSD
External connections		
		- 2 USB - 1 Ethernet - 1 RS-232
Screen dimensions	3.1. p. 21.5 colių (inch) įstrižainės kompiuterinis LCD monitorius su integruotu kompiuteriu	21.5 inch LED screen

	CC-100XP	CC-100
Dimensions-W x H x D (mm)	560 x 358 x 56	560 x 358 x 56
LCD: contrast ratio	3.7. p. LCD ekrano raiška 10000:1	10,000:1
Weight (kg)	5.6 kg	5.6 kg
Power consumption	120 VA	
Accessories	Polaroid filters for trial frame	
	Remote controller	

IMPORTANT

Subject to change in design and/or specifications without advanced notice.
In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation.
Medical device Class I. Manufacturer: VISIA imaging S.r.l.



Topcon Europe Medical B.V.
Essebaan 11; 2908 LJ Capelle a/d IJssel; P.O. Box 145;
2900 AC Capelle a/d IJssel; The Netherlands
Phone: +31-(0)10-4585077; Fax: +31-(0)10-4585045
E-mail: medical@topcon.eu; www.topcon-medical.eu

Topcon España S.A.
HEAD OFFICE; Frederic Mompou, 4;
08960 Sant Just Desvern; Barcelona, Spain
Phone: +34-93-4734057; Fax: +34-93-4733932
E-mail: medica@topcon.es; www.topcon.es

Topcon Deutschland GmbH
Hanns-Martin-Schleyer Strasse 41;
D-47877 Willich, Germany
Phone: (+49) 2154-885-0; Fax: (+49) 2154-885-177
E-mail: info@topcon-medical.de; www.topcon-medical.de

Topcon Ireland
Unit 276, Blanchardstown; Corporate Park 2
Ballycoolin; Dublin 15, Ireland
Phone: +353-18975900; Fax: +353-18293915
E-mail: medical@topcon.ie; www.topcon.ie

Topcon Danmark
Præstemarksvej 25; 4000 Roskilde, Danmark
Phone: +45-46-327500; Fax: +45-46-327555
E-mail: info@topcon.dk
www.topcon.dk

Topcon Italy
Viale dell' Industria 60;
20037 Paderno Dugnano, (MI) Italy
Phone: +39-(0)1-49212323; Fax: +39-(0)1-49212324
E-mail: info@topcon.it; www.topcon.it

Topcon Polska Sp. z o.o.
ul. Warszawska 23; 42-470 Siewierz; Poland
Phone: +48-(0)32-670-50-45; Fax: +48-(0)32-671-34-05
www.topcon-polska.pl

Topcon Scandinavia A.B.
Neogatan 2; P.O. Box 25; 43151 Mölndal, Sweden
Phone: +46-(0)31-7109200; Fax: +46-(0)31-7109249
E-mail: medical@topcon.se; www.topcon.se

Topcon France
BAT A1; 3 route de la révolte; 93206 Saint Denis Cedex
Phone: +33-(0)1-49212323; Fax: +33-(0)1-49212324
E-mail: topcon@topcon.fr; www.topcon-medical.fr

Topcon (Great Britain) Ltd.
Topcon House; Kennet Side; Bone Lane; Newbury
Berkshire RG14 5PX; United Kingdom
Phone: +44-(0)1635-551120; Fax: +44-(0)1635-551170
E-mail: medical@topcon.co.uk; www.topcon.co.uk



TOPCON EUROPE MEDICAL B.V.

Essebaan 11, 2908 LJ Capelle a/d IJssel, The Netherlands
Phone: +31-(0)10-4585077; Fax: +31-(0)10-4585045.
E-mail: medical@topcon.eu; www.topcon-medical.eu