



Manual for refraction and patient chair *NEO* and *NEO-S*

manual as of 2012
Update: may 2012
Subject to modifications and amendments!

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Thank you very much for your confidence which you expressed by purchasing this patient chair. With our *NEO* or *NEO-S* you have chosen a modern fully developed product which has been produced and tested according to strict quality criteria. Continuous research and development might lead to changes in version and scope of supply. The figures in this instruction manual might therefore be slightly different in some cases. If you have any questions or need further information regarding the chair, please don't hesitate to call us or send a fax. Our service team will be glad to help you.

1 Device Specifications

Device Type:	Refraction and patient chair <i>NEO</i> Refraction and patient chair <i>NEO-S</i>
Manufacturer:	Block Optic Ltd. Semerteichstr. 60 44141 Dortmund Germany
Intended Applications :	The <i>NEO</i> or <i>NEO-S</i> chair is used as a refraction and patient chair and can be operated as a single chair with a foot switch or directly with a Block refraction and chair. The patient chair <i>NEO</i> or <i>NEO-S</i> is used in areas of ophthalmologic optics and ophthalmology.
Unintended Applications:	Other applications as those described above are prohibited. Unpredictable hazard can come up during unintended use. The motor is not intended for permanent up and down movements with the vertical adjustment. After continuous operation of 1.5 minutes it must be cooled down for at least 8.5 minutes. A continuous operation of the vertical adjustment for more than 1.5 minutes can lead to a defect of the vertical adjustment. During routine operation the required cooling period is achieved automatically.
Scope of supply:	<i>NEO</i> or <i>NEO-S</i> can be delivered with various equipment. The actual scope of supply is listed in detail in the delivery note.
Safety Remarks :	a) Please read the instruction manual carefully and make yourself acquainted with all functions before you start to operate the device. b) Don't change anything at the chair by yourself as this might impact the safety and leads to the expiry of the warranty. c) This chair is not intended for use in areas with risk of explosions. d) Do not operate the chair if you observe visible damages. Breakdowns which have impact on the safety need to be repaired immediately. In this case, please contact an authorized service technician at Block Optic.

e) Only use original accessory parts for the *NEO* or *NEO-S*.

**Liability of
Manufacturer :**

The device has been manufactured according to the latest technical development and acknowledged technical safety directives. Block Optic considers itself responsible for any impact on safety, reliability and performance of the device only if:

- Mounting, extensions, readjustments, modifications or repairs are carried out by authorized persons,
- the electric installation of the concerned room complies with the requirements of VDE 0100-710 and
- the device is used according to the instruction manual.

**Responsibility of
User:**

The user is responsible for:

- Compliance with standards for prevention of accidents and the directives for establishment, operation and application of medical devices (Medical Device Operating Directive)
- Operation,
- Maintenance,
- Duly and safe condition of the product and
- Storage of the instruction manual and the technical appendix at the usage site.

Warranty :

The General Terms and Conditions of Block Optic are effective as the basic principle.

Text Accentuation: Important parts of the text in the instruction manual are marked by accentuations and key words. The following accentuations are used in the actual instruction manual:

Caution!

Indicates a potentially hazardous situation. Please note such precaution measures to prevent any damage from patients or objects.

Important!

Indicates important information. Please read this information to maintain the high safety and function level of the device.

Special note!

Indicates information for proper usage. Please read this information to avoid any misuse.

2 Important information for assembly, use, maintenance and repair

The chair *NEO* or *NEO-S* should only be set up and mounted by the company Block Optic or by authorized technicians of Block Optic!

Repair and maintenance work may only be carried out by the company Block Optic or by authorized technicians of Block Optic!

2.1 Required space and connection requirements

While arranging the patient chair and the Block examination unit in the office, please consider the extra room length for bending down the backrest of the patient chair. If room length is lacking, this extra space can be saved through turning the chair 180° (in an anti-clockwise direction with right-handed units) before the backrest is inclined. This will save extra 600 mm of room length. The minimum amount of the patient chair required is 740 mm x 600 mm (see Illustration 8.1 and Illustration 8.2).

The patient chair is supplied either directly via the connection cable to the examination unit with the required voltage or for individual operation through a locked foot switch with mains supply wire and mains plug (230 V).

Important!

After the initial operation of the chair one has to check whether the automatic switch off for the lift movement is functional! (Only in connection with Block units).

3 Packaging

The *NEO* or *NEO-S* chair can if necessary be supplied packaged in a special transportation box:

Dimensions (L/W/H): variable, depending on extra equipment,
Weight: variable, depending on extra equipment, approx. 55-82 kg

When the packaging boxes are delivered, please check for external damage and observe the enclosed freight information!

Special note!

Please ensure that you remove all component parts belonging to the chair!

To set up the chair you only need the tools of a service technicians. No special tools are required.

4 Scope of supply

The refraction and patient chair *NEO* or *NEO-S* is a versatile appliance with its different accessories and upgrade components.

1. Motor socket 230 V, 50/60 Hz with overload protection and a wire for the connection to Block units, base plate standard black (RAL 9005) and socket standard eloxal white aluminum (production line);
2. Seat upholstery with fixed backrest and variably adjustable head rest, made of black synthetic leather (production line), finishing of the parts are in standard black (RAL 9005),
3. Foot rest for fixed backrest in black synthetic leather with safety equipment, finishing of the parts are in standard black (RAL 9005), upholstery standard;
4. Back rest manually tilted can be continuously adjusted (this movement can be linked with the revolving foot rest), (optional);
5. Foot rest for manually tilting back rest with safety equipment, foot rest is revolving with the tilt of the back rest (optional);
6. Back rest electromotive tilted can be continuously adjusted (this movement can be linked with the revolving foot rest), (optional);
7. Foot rest for electromotive tilting back rest with safety equipment, foot rest is revolving with the tilt of the back rest (optional);
8. Electromotive operated chair adjustment back and forth (optional);
9. Manuel chair adjustment back and forth (optional);
10. Arm rests plastic design, black, folding away (optional);
11. Foot switch with the function UP/DOWN – only to be used in conjunction with Block units (optional);
12. Locked foot switch with mains supply wire and mains plug for individual operation (optional);
13. Hinge mechanism with detent all 90°, any electromotive adjustment only rotation possible 90° and 180° (optional) and
14. Trial lens drawer build in behind the back rest (only small version for NEO- S chair).

5 Appliance description

The refraction and patient chairs have been specially developed for ophthalmologists and opticians that demand the highest standards in regards to equipment they operate and the ease of use. The complete equipped model has a wide spectrum of features at its disposal. All stated lacquering can be changed and modified on request and will be subject to an additional charge.

5.1 Chair bottom parts

Propulsion system –up/down - automatic down:

For the movement of the upper part of the chair high quality electromechanical propulsion is used. This propulsion system ensures a reliable and easy control of the upper part of the chair with at the same time the possibility of a height adjustment of the connecting surface of an area up to 230 mm (minimum seat height: 500 mm; maximum seat height: 730 mm, basic measurements vary depending on configuration of the chair). The propulsion engine is equipped with end switches in the inside and a thermal overload protection.

The existing end switches enable a connection with the control electronics of the Block units and also the realization of the function „AUTOMATIC DOWN". After the examination has been completed it is only necessary to briefly press the key „AUTOMATIC DOWN" and the chair will be brought automatically down to the lower seating position.

Slide mechanism for wheel chair patients:

The changing of seats for wheel chair patients into the refractions and patient chair can be a very troublesome and needlessly strains the patient. In order to avoid this it is possible with the refractions and patient chair *NEO* or *NEO-S* to fit them with a slide mechanism for wheel chair patients (no retrofit possible) (see Illustration 5.1).



Illustration 5.1: Slide Mechanism

Should one want to push the *NEO* or *NEO-S* chair away from its actual location then it shall be necessary to loosen the mountings on the respective Block unit. After this the chair is backed out and can be moved away from the Block unit to the desired

position. After the examination of the wheel chair patient has been concluded the patient chair will be moved back into the mounting of the Block unit.

5.2 Chair upper parts

The refraction and patient chair *NEO* or *NEO-S* is provided with upper parts either with a fixed or tilted back rest. Both versions are available with an adjustable head rest and are equipped with arm rests that can be flapped back (optional). The colour of all painted part of the chair is standard black (RAL 9005). The upholstery – seat, back rest and foot rest - are made of black synthetic leather.

Tilting of the back rest of the NEO-S chair:

The tilting of the back rest is made possible with the application of an oil pressure spring or an electromechanical device. This will enable to continuously adjust and move the back rest from a vertical to a horizontal position. The upward movement of the foot rest and calf support is connected with the tilting of the back rest. If the back rest is completely tilted back then the foot rest will automatically be moved from the vertical to the horizontal position upwards. The result is a comfortable and sufficient lying area which ideally makes the chair usable for small surgical interventions. When the back rest is moved back up again the foot rest will automatically be lowered.

Rotation of the chair top NEO or NEO-S (optional):

The chair top of the *NEO* or *NEO-S* chair is supported with a rotation. A detent is carried out at an angle of each 90°. The option of being able to rotate the chair top is a beneficial feature particularly where there is not enough space in the treatment room to tilt the back rest. In such cases one will have to rotate the chair with the back rest in upright position by 180° passed the front end of the unit and subsequently tilt it. This will help save around 600 mm in room length and at the same time the patient's head will be more centrally placed in the examination room.

6 Operation and safety functions

All electrical functions are controlled via the keypad, placed in an ergonomically advantageous position. This is where all the operating elements for controlling the motor drives for the patient chair are to be found.

6.1 Handling of the motor-driven chair

To change the chair position immediately after using the automatically-down-key of the keyboard, a double pressing on the key "up" is necessary.

6.2 Operating keys – foot switch (optional)

Normally the control of the electromechanical chair functions is made via the main keyboard of the Block units. If the control is carried out by the foot switch, the following keys can be used (see)

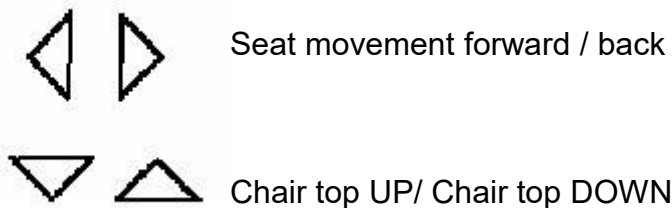


Illustration 6.1: foot switch

6.3 Safety precautions

To avoid the risk of crushing when the patient chair is being raised, there is a built-in electromechanical safety switch on the bottom side of the instrument table of a Block examination unit (see Illustration 6.2). Mechanical contact of the safety switch will stop immediate the drive system of the chair and the table through the main control. In combination with products of other manufacturers ensure that the safety requirements are respected. The safety shut down of the hub function must always be guaranteed.

Special note!

Check the effective operation of the shut down function at regular intervals.

Important!

Should the chair be used with any other units then it is imperative to give regard to the respective safety standards. The utilised propulsion units ensure a long and maintenance free function.



Illustration 6.2: Electromechanical safety switch at a Block-examination unit

Please keep in mind that during each height adjustment and chair rotation the patient is not exposed to hazard. Especially when raising the chair, the seat displacement and the footrest present a source of danger. Therefore make sure that the patient's feet are always positioned on the footrest.

Caution!

Please make sure while adjusting the chair's height that the patient's feet rest comfortably on the footrest of the patient chair. Crushing hazard!!

If the patient chair is decoupled, please do not tilt the backrest!

Caution!

Tilting danger! If the patient chair is decoupled, please do not tilt the backrest!

7 Maintenance, cleaning, care and disposal

Maintenance and Safety Inspections (STK):

To ensure the high safety standard and high quality of the chair *NEO* or *NEO-S* we recommend a regular maintenance. Please contact an authorized Block service technician.

For the chair *NEO* or *NEO-S* we keep up to 3 years after the date of the run-out of the product spare parts on stock. After this period maintenance and repair work can be conducted contingently with original part.

Following maintenance should be conducted yearly through authorized Block service technician:

- Checking the condition of every external connecting wire (Inspection for isolation damage),
- Check up of the effective operation of the shut down function,
- General check up of proper function,
- STK and MTK after Medical Devices Act (MPG).

Maintenance and care:

Important!

Turn off both main switches even when cleaning with a damp cloth. Leave the appliance to dry out completely before using again.

We recommend cleaning the coated surfaces with a cloth moistened (never dripping wet). Please do not use any abrasive or aggressive cleaning supplies. Make sure that no moisture gets in between the keyboard keys. Chair Cleaning: Simply clean with lukewarm water and a micro-fibre rag. Please do not use solvents, chlorides, abrasives, chemical cleaning agents or wax polishes. Please remove ink stains immediately. Do not use care agents containing oil or fat.

Waste disposal:

The chair *NEO* or *NEO-S* contains devices, which cannot be disposed in domestic waste. Please authorise for this purpose a waste management enterprise.

8 Technical Data

Required Space: L x W: look at Illustration 8.1 and Illustration 8.2.

Gross Weight: variable, depending on equipment,
 NEO: 55-66 kg
 NEO-S: 61-82 kg

Mains Voltage: Please look at type label! 230 V 50/60 Hz

Connection Requirements: Shockproof sockets for individual operation or connection cable to the unit.

Operating conditions: Temperature of the environment between +10 °C and +40 °C
 Relative humidity between 30 % and 75 %
 Air pressure between 700 hPa and 1060 hPa

Height adjustment of the chair: Not intended for permanent operation!
 Continuous up and down movements must not exceed 1.5 minutes. Cool down device for at least 8.5 minutes.

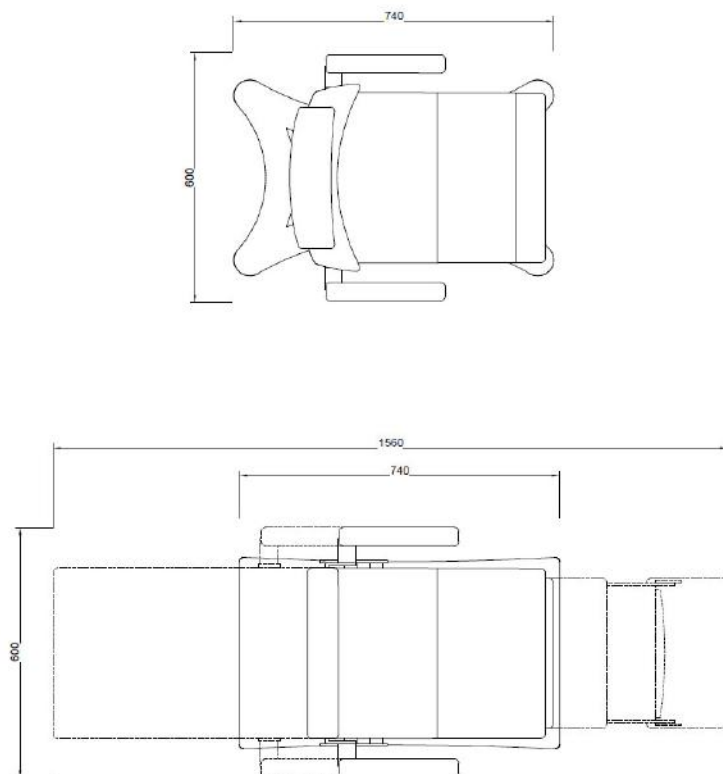


Illustration 8.1: Dimensions of the NEO-S chair

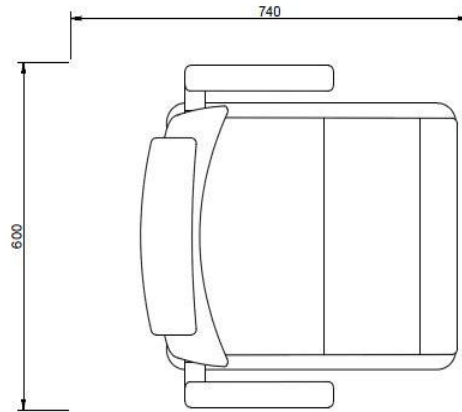


Illustration 8.2: Dimensions of the NEO chair

9 E.G.-Declaration of Conformity

For the following named patient chairs by Block Optic Ltd.

ZAC, CT, SIT, VITO, NEO[®], NEO[®]-S

it is confirmed that the products meet the requirements as determined by the European Community:

89/336/EWG electromagnetic compatibility,
93/42/EWG medical products.

Evaluation of the products complies with the standards listed below:

EN 60601-1:2006 Medical electrical equipment,
EN 55011 Emission of electromagnetic interference,
IEC 801 Immunity from electromagnetic interference.

This declaration in responsibility for the manufacturer:

Block Optic Ltd.
Semerteichstr. 60
44141 Dortmund
Germany

The chairs / stools are labelled with:



Is submitted by:
J. Grawunder, Manager

Dortmund, 1. January 2016

(Place, Date)



(Legal signature)

CERTIFICATE



ISO 9001:2015

DEKRA Certification GmbH hereby certifies that the company

Block Optic Limited

Scope of certification:

Development and production of ophthalmic and optical examination units and chairs

Certified location:

D-44141 Dortmund, Semerteichstraße 60
D-46342 Velen, Industriestraße 6

has established and maintains a quality management system according to the above mentioned standard. The conformity was adduced with audit report no. A15170393.

This certificate is valid from 2016-07-02 to 2019-07-01

Certificate registration no.: 50716344


Lothar Wemhofen
DEKRA Certification GmbH Stuttgart; 2016-07-02

