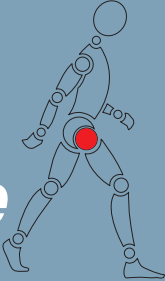


BSC Stem Surgical Technique



 swiss design
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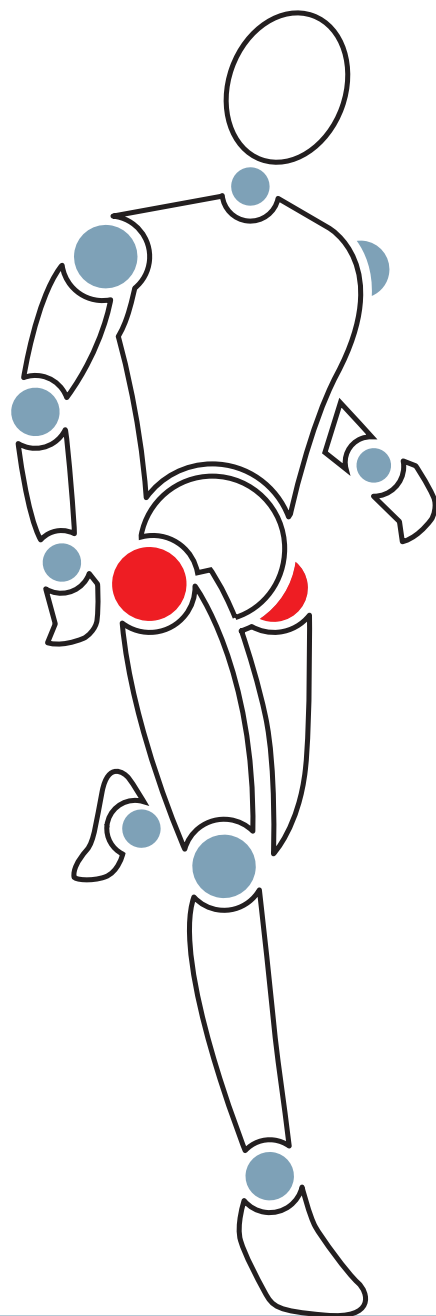
Swiss Made C€ 0123 0304.1221.315 / 37

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1. Introduction

The anatomically adapted BSC Stem according to Prof. G. Biehl, MD, is available in cemented and cementless versions. The stem designed for cementless implantation is made of a Ti6Al7Nb titanium-niobium alloy according to ISO 5832-11 / ASTM F1295. The surface enlargement located in the proximal stem portion consists of a pure titanium coating according to ISO 13179-1 / ASTM F1580 and ensures an extensive and rapid osseointegration of the bone.

The stem for cemented implantation, made of M30 stainless steel implant material according to ISO 5832-9 with a slightly sand-blasted surface, is additionally fitted with longitudinal grooves. This ensures a good and secure fixation in the cement mantle.

The system offers 8 sizes in the cementless version and 7 sizes in the cemented version and allows an optimal adaptation to the anatomical conditions. The stems are fitted with 12/14 Eurocone and have a CCD angle of 135° degrees.

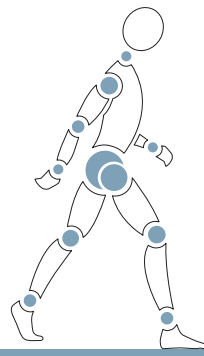


BSC - Stem, cemented

BSC - Stem, cementless

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2. System description

2.1 Prosthesis design

- anatomically adapted shell left/right
- sizes increasing three-dimensionally
- 12/14 Eurocone

2.1.1 BSC-Stem cementless

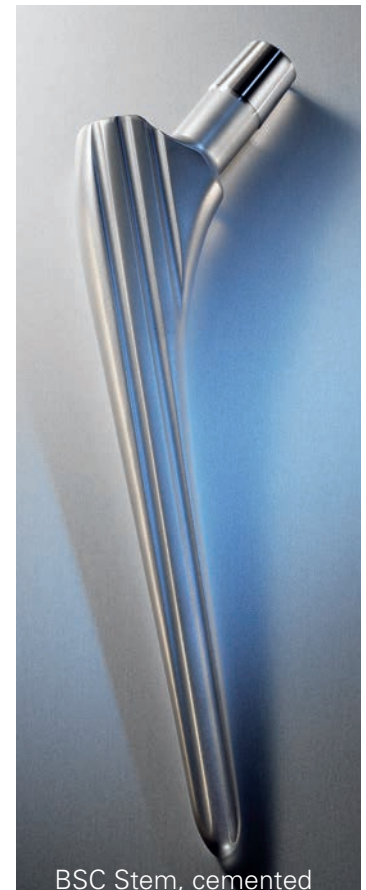
- 8 sizes
- Material: forged alloy Ti6Al7Nb, ISO 5832-11 / ASTM F1295
- Fixation in the proximal region
- Pure titanium coating ISO 13179-1 / ASTM F1580 in the proximal stem portion with roughness Ra 30-35 μm and surface roughness in the distal uncoated stem portion of Ra 1 - 1.5 μm .



BSC Stem, cementless

2.1.2 BSC-Stem cemented

- 7 sizes
- Material: M30, ISO 5832-9
- Surface fitted with longitudinal grooves for a good and secure fixation in the cement mantle. Surface roughness: Ra 1 - 1.5 μm .



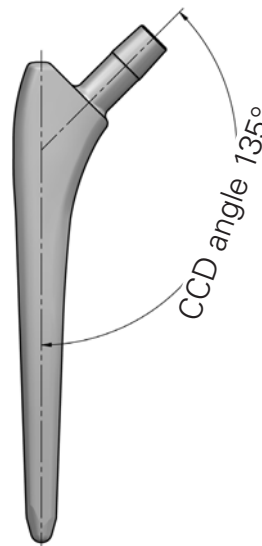
BSC Stem, cemented



2. System description

2.2 CCD angle

The CCD angle of BSC Stem is 135° degrees.



2.3 Instrumentation

Simple and functional instrumentation (left and right version) supports safe implantation of both cementless and cemented stem.



3. *Preoperative Planning*

Using the available X-ray templates, it is possible to plan the stem size, the stem position as well as the resection height.

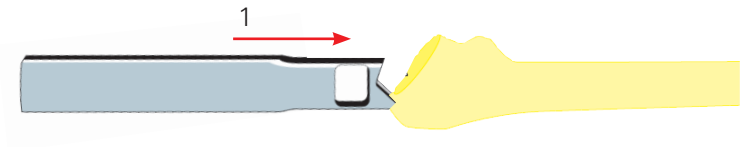
The X-ray films are also available in digital formats.



4. Surgical technique

4.1 *Box chisel*

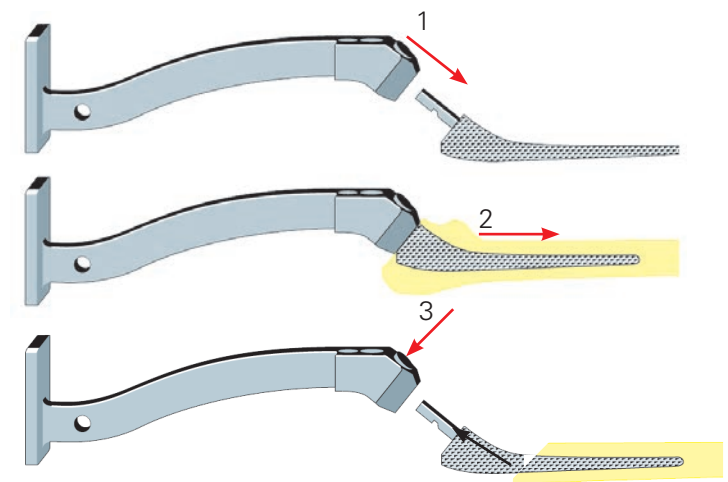
Open the medullary canal.
Eröffnung des Markraumkanals.



4.2 *Impactor / rasp*

Rasp the femur stepwise to the
suitable implant size.

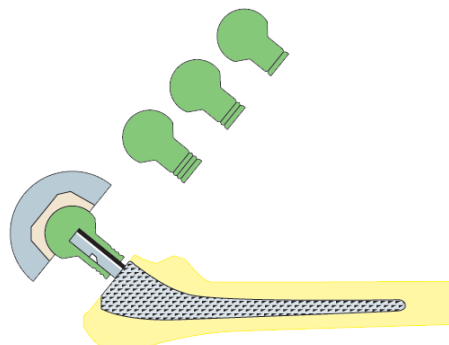
Detach the impactor from the rasp
by pressing the button.



4.3 *Trial femoral heads*

Mount a trial head (3 available
lengths) on the rasp.

Perform a trial reduction.

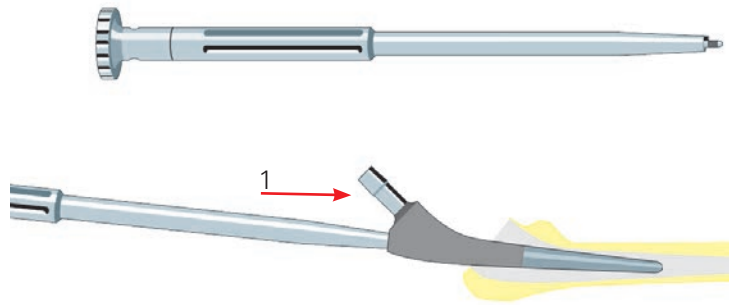


4. Surgical technique

4.4 Inserter – cementless

Insert the selected implant with the inserter.

Cementless BSC stem (1) should correspond to the rasp size.

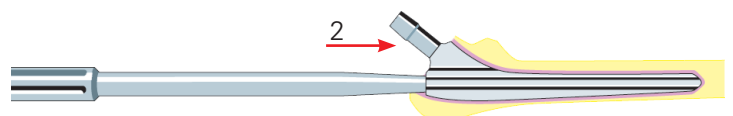


4.5 Inserter – cemented

Possibly insert a cement plug after rasping.

Prepare and insert the cement.

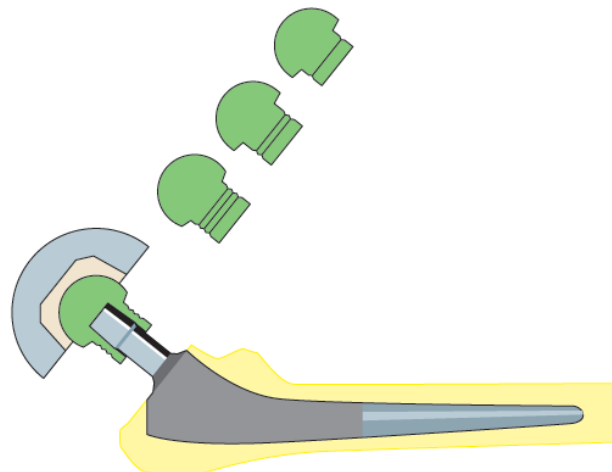
Insert the cemented BSC stem (2) corresponding to the rasp size.



4. Hold the stem until the cement has hardened. Instructions of the cement manufacturer should be followed.

4.6 Original stem & trial femoral heads

Possibly perform a new trial reduction for the original implant using trial heads (3 available lengths).



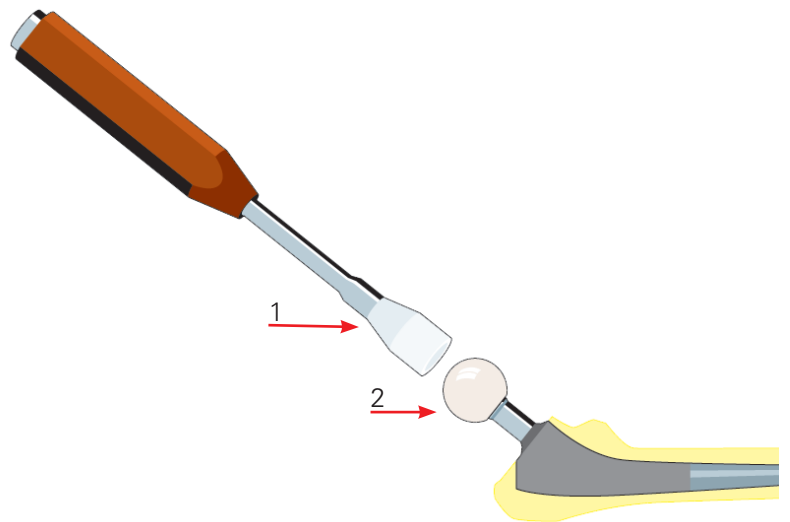
4. Surgical technique

4.7 Femoral head impactor

Screw the impactor attachment (1) onto the impactor.
Put on the femoral head.

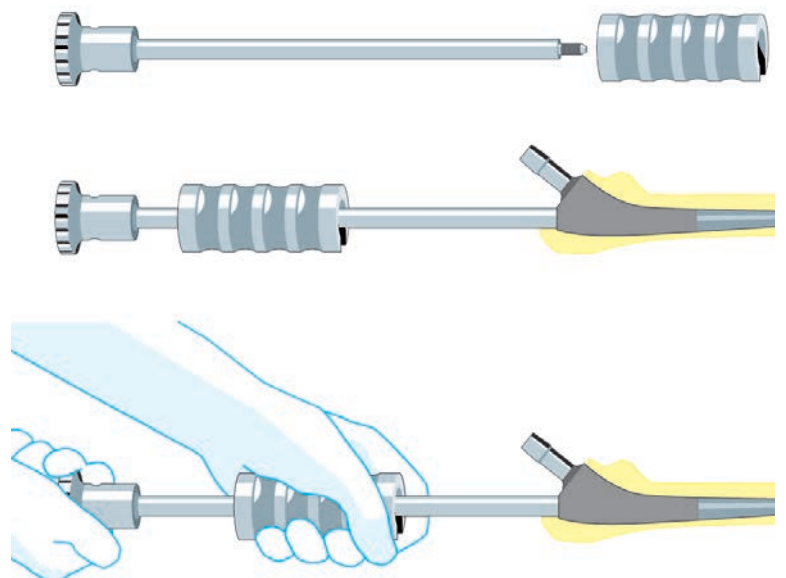
Before repositioning the original ballhead, the taper is carefully cleaned by hand.

Fix the head (2) by lightly tapping on the mounted impactor or by rotating it clockwise.



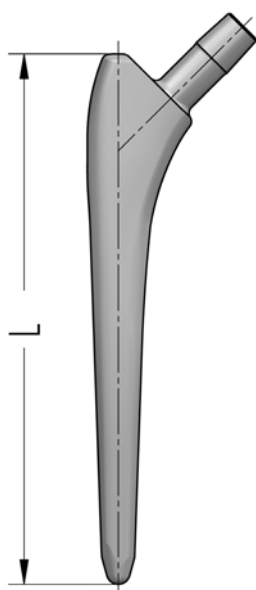
4.8 Extractor

Knock out the stem using the extractor with the help of a slide weight.



5. Ordering information

5.1 Implants



BSC Stem

| Size | cementless left | cementless right | cemented left | cemented right | Length (L) in mm |
|------|-----------------|------------------|---------------|----------------|------------------|
| 0 | 140.00.00 | 143.00.00 | 145.00.00 | 148.00.00 | 139 |
| 1 | 140.00.01 | 143.00.01 | 145.00.01 | 148.00.01 | 145 |
| 2 | 140.00.02 | 143.00.02 | 145.00.02 | 148.00.02 | 151 |
| 3 | 140.00.03 | 143.00.03 | 145.00.03 | 148.00.03 | 157 |
| 4 | 140.00.04 | 143.00.04 | 145.00.04 | 148.00.04 | 163 |
| 5 | 140.00.05 | 143.00.05 | 145.00.05 | 148.00.05 | 169 |
| 6 | 140.00.06 | 143.00.06 | 145.00.06 | 148.00.06 | 175 |
| 7 | 140.00.07 | 143.00.07 | ————— | ————— | 181 |

Ceramic femoral heads



Ceramic femoral heads Stemox $\varnothing 28$ mm, $\varnothing 32$ mm and BIOLOX®forte $\varnothing 28$ mm, $\varnothing 32$ mm are available in sizes S, M and L.

BIOLOX®delta and BIOLOX®OPTION are available in $\varnothing 28$ mm in sizes S, M, L and in $\varnothing 32$ mm, $\varnothing 36$ mm and $\varnothing 40$ mm in sizes S, M, L and XL.

In case of a possible replacement, a BIOLOX®OPTION femoral head should be used. Ceramic / ceramic pairs only from the same manufacturer may be used.

Metal femoral heads



Metal femoral heads are available for Stelia stem in diameters $\varnothing 28$ mm, $\varnothing 32$ mm in sizes S, M, L, XL and XXL. Metal femoral heads in diameters $\varnothing 36$ mm and $\varnothing 40$ mm are available in sizes S, M, L and XL.

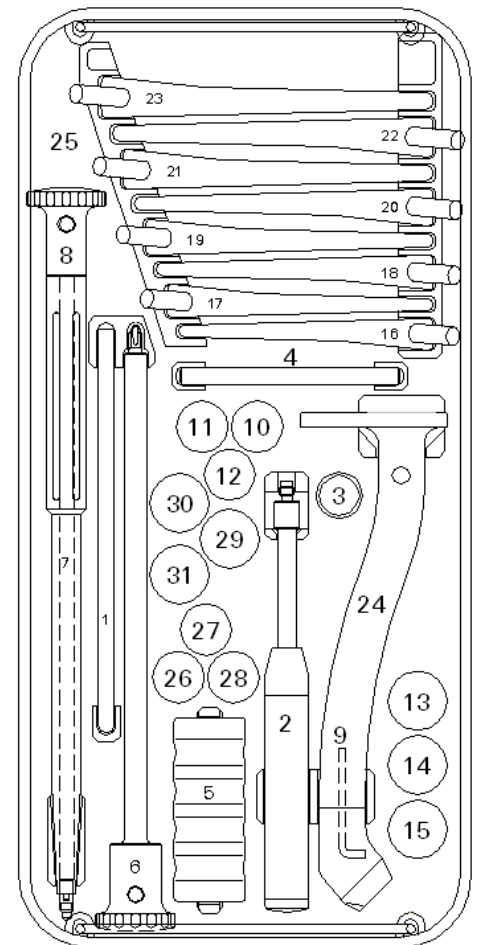
5. Ordering information

Sterility
The instruments and tray items are supplied non-sterile. Prior to use, they should be sterilised by usual methods in autoclaves in accordance with the hospital guidelines. The correct settings such as sterilisation temperature and cycle time should be taken from the user manual of the autoclave manufacturer.

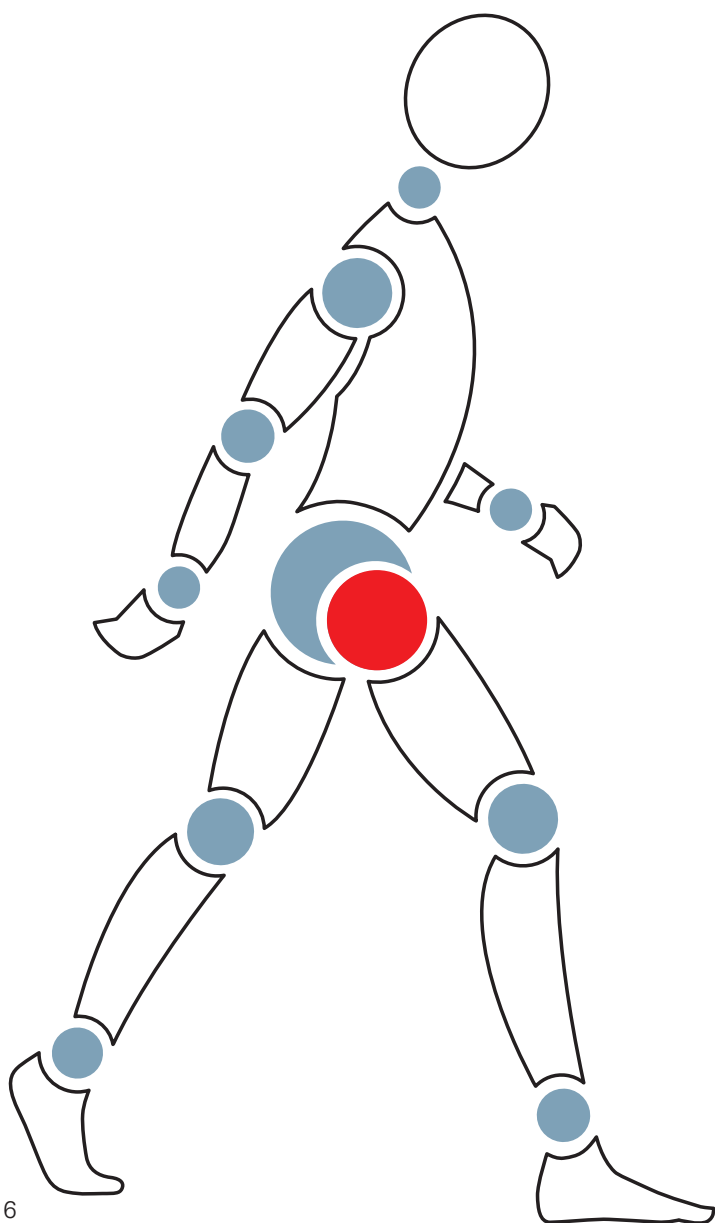
Instrument manufacturers and sellers assume no responsibility for the sterilisation of products by the buyer.

5.2 Instruments

| Pos. | Art.No. left | Art.No. right | Description |
|------|------------------|------------------|-----------------------------------|
| 1 | 60.1001 | 60.1001 | Box chisel, angled |
| 2 | 60.1006 | 60.1006 | Impactor handle |
| 3 | 60.1008 | 60.1008 | Impactor attachment - ball |
| 4 | 60.1009 | 60.1009 | Crossbar for rasp handle |
| 5 | 60.1010 | 60.1010 | Slide weight for extractor |
| 6 | 60.1011 | 60.1011 | Extractor |
| 7 | 60.1012.01 | 60.1012.01 | Impactor shaft |
| 8 | 60.1012.02 | 60.1012.02 | Impactor threaded rod |
| 9 | 60.1021 | 60.1021 | Allen wrench 4 mm for rasp holder |
| 10 | 60.28.11 | 60.28.11 | Trial head 28 S for stem taper |
| 11 | 60.28.12 | 60.28.12 | Trial head 28 M for stem taper |
| 12 | 60.28.13 | 60.28.13 | Trial head 28 L for stem taper |
| 13 | 60.32.11 | 60.32.11 | Trial head 32 S for stem taper |
| 14 | 60.32.12 | 60.32.12 | Trial head 32 M for stem taper |
| 15 | 60.32.13 | 60.32.13 | Trial head 32 L for stem taper |
| 16 | 65.140.00 | 65.143.00 | BSC trial rasp, size 0 |
| 17 | 65.140.01 | 65.143.01 | BSC trial rasp, size 1 |
| 18 | 65.140.02 | 65.143.02 | BSC trial rasp, size 2 |
| 19 | 65.140.03 | 65.143.03 | BSC trial rasp, size 3 |
| 20 | 65.140.04 | 65.143.04 | BSC trial rasp, size 4 |
| 21 | 65.140.05 | 65.143.05 | BSC trial rasp, size 5 |
| 22 | 65.140.06 | 65.143.06 | BSC trial rasp, size 6 |
| 23 | 65.140.07 | 65.143.07 | BSC trial rasp, size 7 |
| 24 | 65.140.14 | 65.143.14 | BSC rasp handle |
| 25 | 65.140.800.01-80 | 65.143.800.01-80 | Empty tray with inserts |
| 26 | 65.28.01 | 65.28.01 | Trial head 28 S for trial rasp |
| 27 | 65.28.02 | 65.28.02 | Trial head 28 M for trial rasp |
| 28 | 65.28.03 | 65.28.03 | Trial head 28 L for trial rasp |
| 29 | 65.32.01 | 65.32.01 | Trial head 32 S for trial rasp |
| 30 | 65.32.02 | 65.32.02 | Trial head 32 M for trial rasp |
| 31 | 65.32.03 | 65.32.03 | Trial head 32 L for trial rasp |



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We are there when you need us:

Switzerland Headquarters
Stemcup Medical Products AG
Aargauerstrasse 180
CH- 8048 Zürich
Tel. +41 (0)43 311 85 00
Fax. +41 (0)43 311 85 09
info@stemcup.ch
www.stemcup.ch

Germany
Stemcup Medical Products GmbH
Wallbrunnstrasse 24
D-79539 Lörrach
Tel. +49 (0) 7621 162 00 49
Fax. +49 (0) 7621 161 97 78
info@stemcup.de
www.stemcup.de

Austria
Stemcup Medical Products Austria GmbH
Schwindgasse 20/1/4
A-1040 Wien
Tel. +43 (0) 1 890 40 53
Fax. +43 (0) 1 890 40 54
info@stemcup.at
www.stemcup.at

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