Create your own surgery with a smart connected solution

SYMBIOZ
Full HD

INTUITIVE
CONNECTION

COMEG
medical technologies
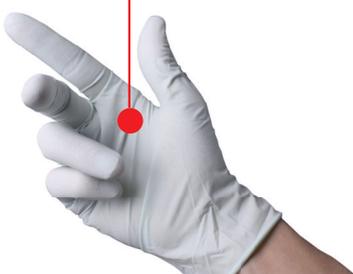
WITH SYMBIOZ, YOUR SURGERIES HAVE NEVER BEEN SO PERSONALIZED & POWERFUL

SYMBIOZ
Full HD

6
specialties with optimized settings

3
buttons to control your complete system

∞
personalized surgeon profiles

LED intensity equivalent to a **300** w Xenon light source

45 L/min insufflator with bariatric function

YOUR CONNECTED SOLUTION

Personalized tower settings for each physician

A unique image for each user, this is now possible with personalized user profiles. More brightness, less red colors, etc… every surgeon has his own perception of his work environment and is used to a certain type of image. Then, physicians can program their parameters, save them into their own user profile, and retrieve them each time they use the tower. One tower, multiple users and as many settings as desired.

Touchless technology to connect to your profil

Personalized profiles can be stored on a Scard. Simply approach your card to the camera control unit and… this is it! You're connected and all your preferred parameters are displayed. Now, get ready for your surgery!

SCARD

Enabling the elements to communicate together

ISYME is an exclusive technology connecting all the towers elements together and taking the best of each to provide the best user experience, no matter what happens. Above all, everything is connected to the camera and can be controlled directly from the camera head to increase the ease of use for surgeons. ISYME provides then an optimal surgical environment.

ISYME
INTELLIGENT SYMBIOZ

« This endoscopy system is a model of simplicity and is stuffed with technology. This is how my operating room staff feel the equipment and this is how I use it. The same logic is found in the touch screen for example. And the same is true for the camera head where numerous adjustments can be made, almost intuitively without disturbing the work of my team and its coordination. For a surgeon, this is essential! »

Dr. N. CASTAING
Gynecology Surgeon,
Centre Hospitalier des Quatre Villes,
Saint Cloud, France

YOUR COMPLETE SOLUTION

All connected together, the Symbioz elements generate a real synergy to provide the best work environment as possible: an exceptional image quality from the camera to the monitor, the good amount of light but also a perfectly controlled insufflation flow. The complete solution is a safe and accurate system to support you in any surgeries.

CAMERA HEAD

SYMBIOZ *Flow*

SYMORE
IMAGE ENHANCEMENT

SYMBIOZ *Cam*
Full HD

OR

SYMBIOZ *Cam+*
Full HD

SYME
INTELLIGENT SYMBIOZ

SYMBIOZ *Master*

DICOM & STREAMING version (option)

SYMBIOZ *Led*

MONITOR
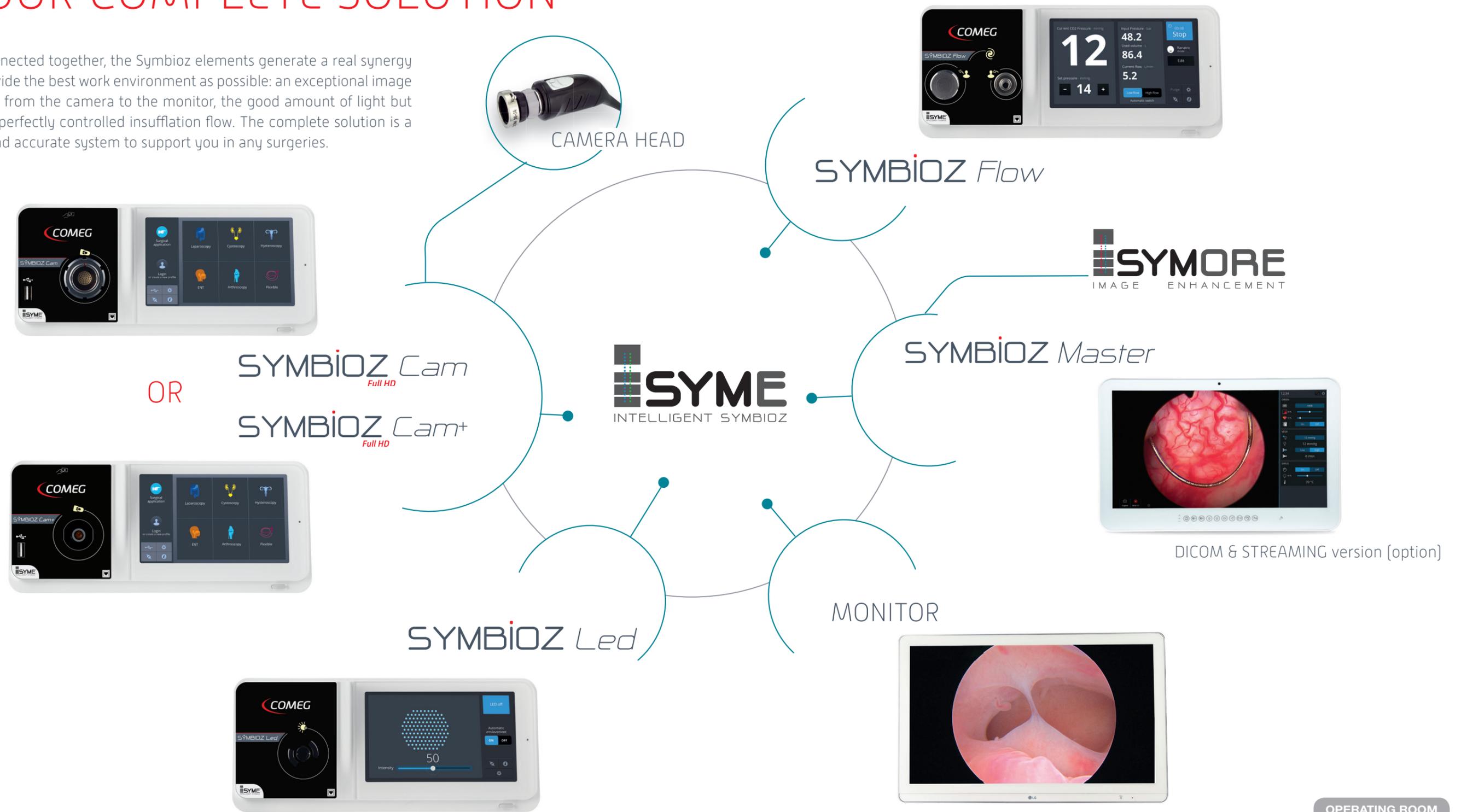
OPERATING ROOM
CERTIFIED

Connected

CONNECT YOUR CMOS CAMERA TO HIGHLIGHT YOUR SURGERY

Product benefits

High quality images
Having control of your surgery, identify the details, brings more quality to your work. With a Full HD camera, and adjustable image settings, perfectly visualize your operating area.

Personalized profiles for each surgeon
Customized settings can be programmed, stored and retrieved with contactless SCard using NFC technology. The tower is programmed facing the personalized settings for particular surgery for each surgeon.

Fully controllable from the camera head
Thanks to the ISYME technology, all parameters can be controlled from the camera head: video parameters but also the light and the insufflator.

SYMBIOZ Cam+
Full HD

Exmor R™
CMOS Sensor

1CMOS

Sensor **twice as sensitive***, for great image quality even in low light conditions

Ref. S_198_8000

BlueTest function to enhance tubal permeability
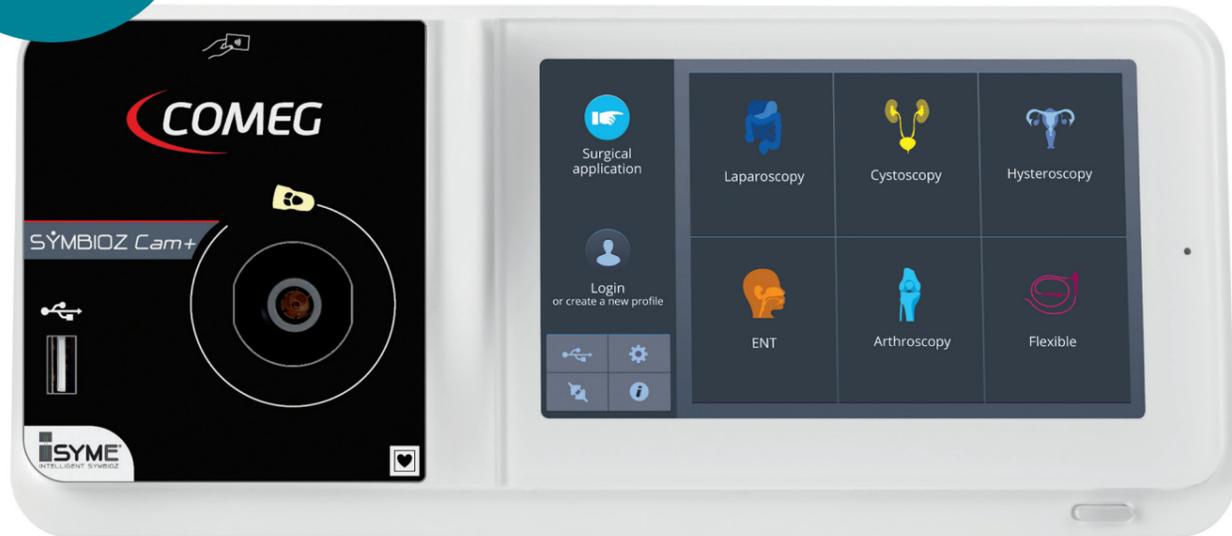
Ref. S_198_9000 EU
Ref. S_198_9001 US

SYMBIOZ Cam
Full HD

3CMOS

With or without Full HD integrated recorder

Ref. S_398_8000

Ref S_398_9000 or S_398_9002 EU
Ref S_398_9001 or S_398_9003 US

Exmor R™ is an unregistered trademark of SONY
* As conventional Full HD sensors

SYMBIOZ Cam+   SYMBIOZ Cam

SYMBIOZ *Led*

Product benefits

Lifetime
An exceptional lifetime up to 50.000h thanks to the LED technology

Homogeneity of the light
No more halo effect thanks to the LED technology

Automatic light control
A light intensity automatically adapted depending on the surgical environment

Be demanding with your light source

The light is one of the most important element during surgery, in fact, optimum settings and brightness allow a fluid act and essential visual comfort for the practitioner.
In this demanding and adaptability spirit, the COMEG teams have developed SYMBIOZ Led, the perfect light source.
Adapt the light according to your needs and enjoy bright surgeries!

Remote control from the camera head

Thanks to the ISYME Function, the LED is connected to the camera and can be controlled directly from the camera head: Switch ON/OFF the light or adjust the intensity, remotely take control of the surgery!

LED Light Source:

- 50.000h lifetime
- LED intensity equivalent to a 300W Xenon light source
- Touch screen with 16:9 resolution
- Automatic light cable detection for safety
- Automatic luminosity adjustment
- Light can be controlled directly from the camera head

Ref S_298_0001 EU
Ref S_298_0002 US

SYMBIOZ Led

CONNECT YOUR INSUFFLATOR FOR A SAFE WORK ENVIRONMENT

SYMBIOZ *Flow*

Product benefits

Powerful automatic flow to maintain a selected pressure
The automatic adjustment of insufflation maintains the desired pressure to balance with leakages, in any conditions

Remaining CO_2 available directly displayed in minutes
Patented technology that allows the nurses to focus on others points than CO_2 cylinder replacement.

External exsufflation valve
Designed to avoid overpressure and cross contamination

PATENTED*

Remaining insufflation time displayed in minutes

Ref S_698_0001 EU
Ref S_698_0002 US

Focus on your patient, not your equipment

A system designed for the safety and wellness of patients. A controlled flow to maintain the selected pressure, an instant display of available CO_2, an external exsufflation to minimize cross-contamination and precautionary messages displayed directly on the screen, offer comfort for both the patient and the surgeon.

Article from Pr A. Sezeur

« The choice of an insufflator should takes into account the risks linked to pneumoperitoneum in order to minimize them. The COMEG insufflator is designed to meet the safety requirements thanks to several innovations. »

Pr A. SEZEUR
Groupe Hospitalier Diaconesses Croix St Simon, Paris, France

Insufflator:

- Insufflation can be controlled directly from the camera head
- From 2L/min to 45L/min insufflation range
- Automatic management of insufflation flow to maintain the desired pressure
- Proprietary technology to calculate remaining available insufflation time
- Insufflation pressures displayed simultaneously on both Monitor and Touch screen

- Large font, easy to read touch screen with 16:9 resolution
- Internal heating system
- Bariatric specific insufflation parameters
- External desufflation valve to minimize cross contamination and over insufflation
- Great efficiency in low pressure (8-9mmHg)

* Developed in collaboration with Pr. A. Sezeur, Diaconesses Croix Saint Simon hospital, Paris, FRANCE
(Patented UPMC / SOPRO SA)

SYMBIOZ Flow

CONNECT YOUR INTUITIVE COMMUNICATION SYSTEM

Technology at your fingertips with **SYMBIOZ Master**, the software dedicated to your patient management and database, to use with SYMBIOZ.

SYMBĪOZ *Master*

Product benefits

Remote panel
Control of all connected SYMBIOZ devices from one unique place in order to avoid the sterile surgical field and gets more accessibility to the functions.

Patient and doctor database management
Create, modify and save your patients and doctors data in one unique device.

ISYMORE
Chromatic image enhancement technology developed to improve anatomical vascularization visualization.
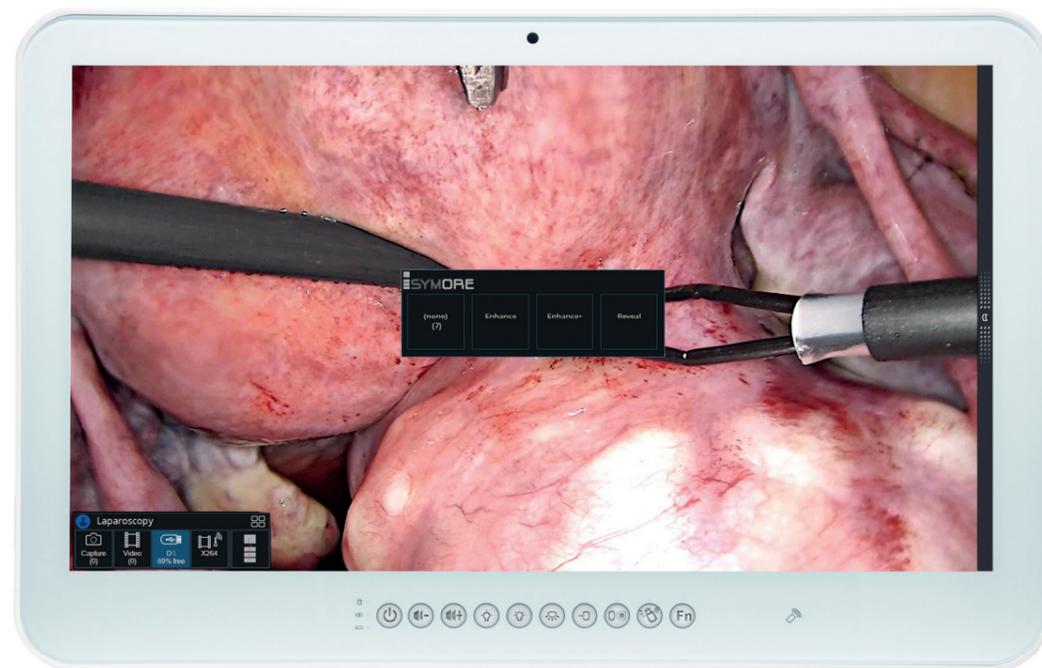
Ref S_098_0002 or S_098_0003 / DICOM license: S_998611

One tool, multiple possibilities with SYMBIOZ MASTER

Patient data
Patient and doctor database management
Full HD images and video recordings
Visualization and edition of recorded/imported media
Reports edition and customization
Control of all connected SYMBIOZ devices from one unique place
Feedbacks of essential information from SYMBIOZ devices

Streaming
The easy-going Streaming system allows various usages:
. Live surgeries
. Educational support
. Telehealth
. Remote monitoring

Dicom
Services available:
. Worklist
. Query / Retrieve
. Storage
. Print

Compatible modalities:
. CT (Computed Tomography)
. US (Ultrasounds)
. ES / VL (Endoscopy / Visible light)
. SC / OT (Secondary capture / Other)

ISYMORE
Early diagnosis is the key to control symptoms and prevent worsening of the pathology. Then, ISYMORE provides the surgeon with 3 different filters which allow him to improve tissue differentiation or highlight the darkest parts of the image and prevent overexposure.
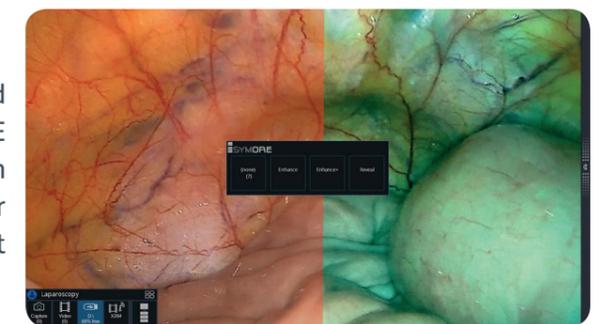
SYMBIOZ Master

Full HD solution

LG 27" Full HD monitor

A Full HD signal from the sensor to the monitor, the guarantee of always having the best image to perform the best surgeries.
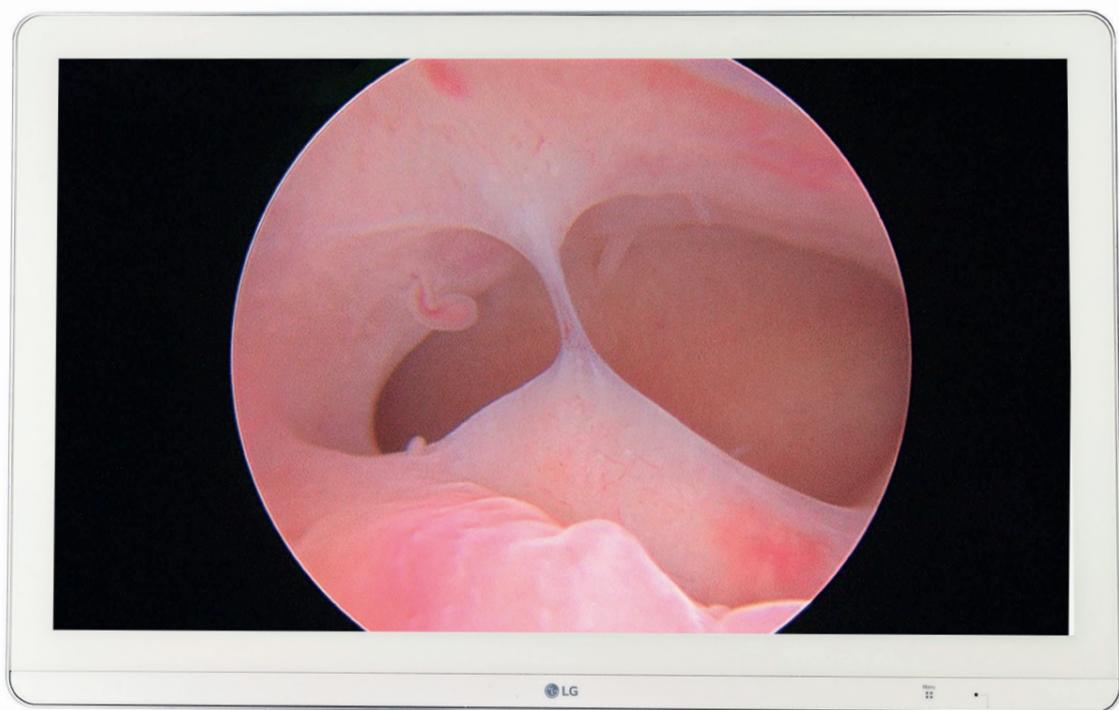

Ref S_700794

Monitor:

- Panel: 27" (16:9) - TFT AM LCD / IPS technology / LED backlight
- Resolution: Full HD (1920 x 1080 pixels)
- Luminance: 1000cd/m2 (Typ.)
- Contrast ratio: 1000:1 (Typ.)
- Viewing Angle (H/V): 178° / 178°
- Colors: 1000 million (10-bit)

- Video inputs: 1x HDMI (1.4), 1x S-Video, 1x Composite, 1x 3G-SDI, 1x DVI (Compatible with D-sub & Component via adaptor)
- Video outputs: 1x 3G-SDI, 1x DVI-D
- Mounting: 100x100 VESA
- Dimensions (W x H x D): 656 x 412 x 62 mm
- Weight: 7700 g
- Power supply: 100 - 240 VAC / 50 - 60 Hz

4K ready solution

Barco 31" 4K monitor

Go beyond the standards by upscaling your Full HD image to a 4K one. Improve your visibility and clearly see the details for optimized surgeries.
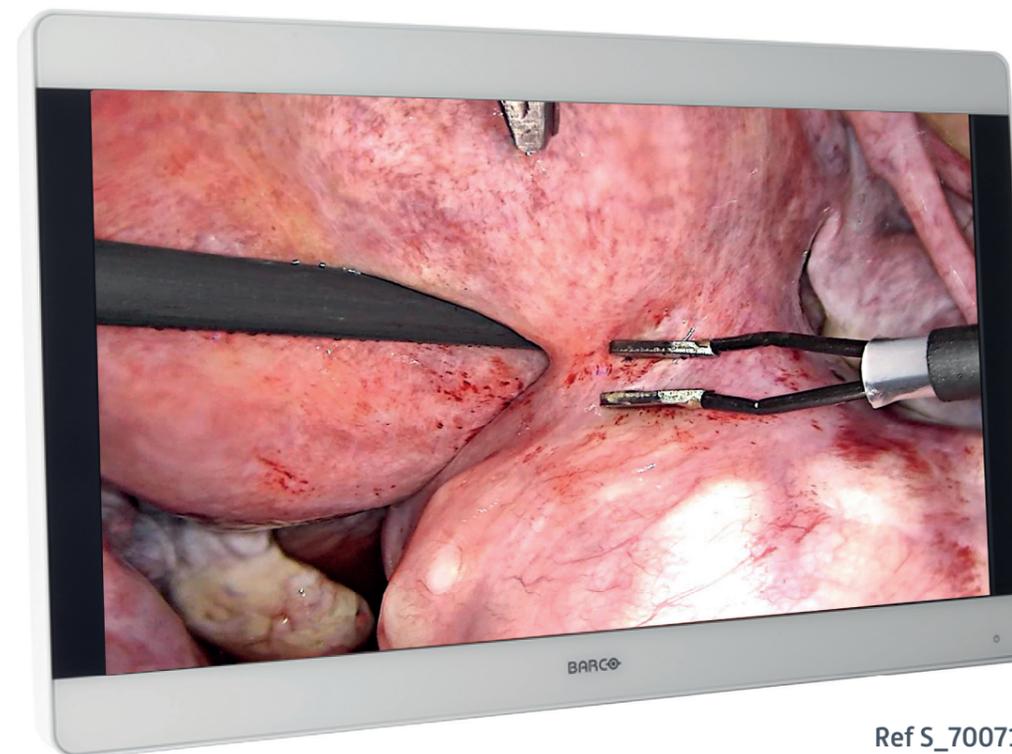

Ref S_700711

Monitor:

- Panel: 31" - TFT AM LCD / IPS-PRO technology / LED backlight
- Resolution: 4K-2K (4096 x 2160 pixels)
- Luminance: Max 550 cd/m2
- Contrast ratio: 1400:1
- Viewing Angle (H/V): 178° / 178°
- Colors: 1073 million (10-bit)

- Aspect ratio: 17:9
- Video inputs: 4K-UHD input selectable, FHD inputs (upscaled to UHD): 1 x DVI, 1 x 3G-SDI
- Video outputs: 1 x 3G-SDI, 1 x DVI
- Mounting: 100x100 & 200x100 mm VESA
- Dimensions (W x H x D): 777 x 472 x 93 mm
- Weight: 12100 g
- Power supply: 100 - 250 VAC / 47 - 63 Hz

LG Full HD 27"

BARCO 4K 31"

A COMPLETE RANGE FOR ANY NEED

SYMBIOZ Full HD

	SYMBIOZ LUXE WITH INSUFFLATOR	SYMBIOZ LUXE	SYMBIOZ PREMIUM WITH INSUFFLATOR	SYMBIOZ PREMIUM
Ref EU	S_K30_1004	S_K30_1006	S_K30_1000	S_K30_1002
Ref US	S_K30_1005	S_K30_1007	S_K30_1001	S_K30_1003
27'' FULL HD MONITOR Ref S_700794	✓	✓	✓	✓
SYMBIOZ Led Ref EU: S_298_0001 Ref US: S_298_0002	✓	✓	✓	✓
SYMBIOZ Cam WITH RECORDER Ref EU: S_398_9002 Ref US: S_398_9003	✓	✓		
SYMBIOZ Cam Ref EU: S_398_9000 Ref US: S_398_9001			✓	✓
SYMBIOZ Flow Ref EU: S_698_0001 Ref US: S_698_0002	✓		✓	

SYMBIOZ+ Full HD

	SYMBIOZ+ 500	SYMBIOZ+ 300	SYMBIOZ+ 100
Ref EU	S_K30_1016	S_K30_1014	S_K30_1012
Ref US	S_K30_1017	S_K30_1015	S_K30_1013
27'' FULL HD MONITOR Ref S_700794	✓	✓	✓
SYMBIOZ Cam+ Full HD WITH RECORDER Ref EU: S_198_9000 Ref US: S_198_9001	✓	✓	✓
SYMBIOZ Led Ref EU: S_298_0001 Ref US: S_298_0002	✓	✓	✓
SYMBIOZ Flow Ref EU: S_698_0001 Ref US: S_698_0002	✓	✓	
SYMBIOZ Master Ref: S_098_0002	✓		

Complete solution

IN ADDITION TO YOUR SYSTEM

PREMIUM CARTS & SHORT ARM

- 3x Adjustable shelves
- 1x Camera head holder
- 1x CO_2 cylinder holder
- 1x Drawer
- 1x Long arm on central pivot
- 1x Short arm on central pivot
- 1x 5m Power Cord
- 7x 60cm connection power cables
- 4x Castor wheels (2 with brake)

Art. N°	Description
700598	Premium cart with long and short arms – EU
700624	Premium cart with long and short arms + transformer – EU
700678	Premium cart with long and short arms – US
700682	Premium cart with long and short arms + transformer – US
700686	Premium cart with long and short arms – UK
700690	Premium cart with long and short arms + transformer – UK

PREMIUM CARTS

- 3x Adjustable shelves
- 1x Camera holder
- 1x CO_2 cylinder holder
- 1x Drawer
- 1x Long arm on central pivot
- 1x 5m Power Cord
- 7x 60cm connection power cables
- 4x Castor wheels (2 with brake)

Art. N°	Description
700597	Premium cart with long arm – EU
700625	Premium cart with long arm + transformer – EU
700679	Premium cart with long arm – US
700683	Premium cart with long arm + transformer – US
700687	Premium cart with long arm – UK
700691	Premium cart with long arm + transformer – UK

BASIC CARTS & SHORT ARM

- 3x Adjustable shelves
- 1x Camera head holder
- 1x CO_2 cylinder holder
- 1x Drawer
- 1 x articulated Short arm
- 1x Fixed mount for flat panel
- 1x 5m Power Cord
- 7x 60cm connection power cables
- 4x Castor wheels (2 with brake)

Art. N°	Description
700596	Basic cart with fixed screen and short arm – EU
700627	Basic cart with fixed screen and short arm + transformer – EU
700680	Basic cart with fixed screen and short arm – US
700684	Basic cart with fixed screen and short arm + transformer – US
700688	Basic cart with fixed screen and short arm – UK
700692	Basic cart with fixed screen and short arm + transformer – UK

BASIC CARTS

- 3x Adjustable shelves
- 1x Camera head holder
- 1x CO_2 cylinder holder
- 1x Drawer
- 1x Fixed mount for flat panel
- 1x 5m Power Cord
- 7x 60cm connection power cables
- 4x Castor wheels (2 with brake)

Art. N°	Description
700595	Basic medical cart with fixed screen – EU
700628	Basic medical cart with fixed screen + transformer – EU
700681	Basic medical cart with fixed screen – US
700685	Basic medical cart with fixed screen + transformer – US
700689	Basic medical cart with fixed screen – UK
700693	Basic medical cart with fixed screen + transformer – UK

In addition

IN ADDITION TO YOUR SYSTEM

CART ACCESSORIES

N°	Art. N°	Description
1	700359	Pull-out shelf 320 x 450mm for keyboard
2	700621	Camera holder (stainless steel)
3	700622	Cable hook (stainless steel)
4	700619	CO$_2$ cylinder holder 140mm (rear side cart)
5	700317	Shelf 320 x 450mm
6	700361	Foot pedal holder
7	700618	Flexible scope holder
8	700617	Serum holder
9	700309	Power cord C13-C14 (60cm)
10	700616	EQP connection lead (60cm)

IRRIGATION SYSTEMS

Multi-indication pump: 4 specialties in one device

- Hysteroscopy
- Laparoscopy
- Urology
- Arthroscopy

Art. N°	Description
S_672_0002*	**Multi-indication pump** for irrigation and suction No specialty by default
S_700730*	**Transponder HYSTEROSCOPY option**
S_700721*	**Transponder UROLOGY option**
S_700722*	**Transponder ARTHROSCOPY option**
S_700723*	**Transponder LAPAROSCOPY option**

Laparoscopic pump: One device, two functions

Art. N°	Description
S_673_0002	**Laparoscopic pump** for irrigation and suction

* Not for sale in USA
Manufacturer: WOM, EC medical device of Class IIa & IIb

In addition

www.comegmedical.com

COMEG Medical Technologies is the Medical Division of the Acteon Group.

• Over **40 years of experience** in surgical field

• Focus specifically in **Minimally Invasive Surgery (MIS)**

• Global presence on **6 continents**

• **Meeting the specific needs** for GYN, URO, ENT, LAP, ARTHRO, CMF and PLASTIC surgery

• **Intuitively connecting physicians** with the appropriate solutions

COMEG designs intuitive solutions for minimally invasive surgeries.

COMEG
medical technologies

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