

# meet

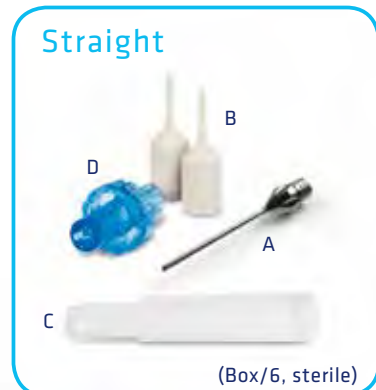
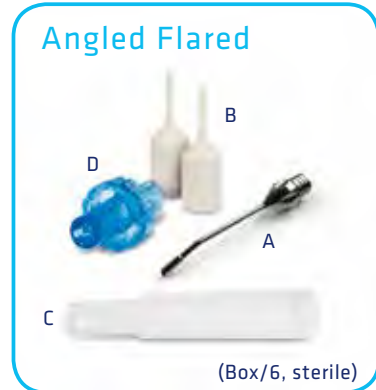
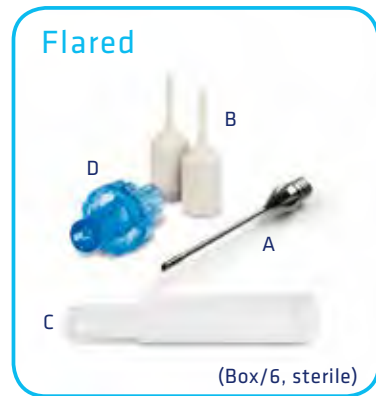
The logo for EVO, featuring the letters 'EVO' in a stylized, rounded font with a blue-to-white gradient and a blue outline.

reddot design award  
winner 2013

inspired by you created by DORC

# EVA Phaco Packs

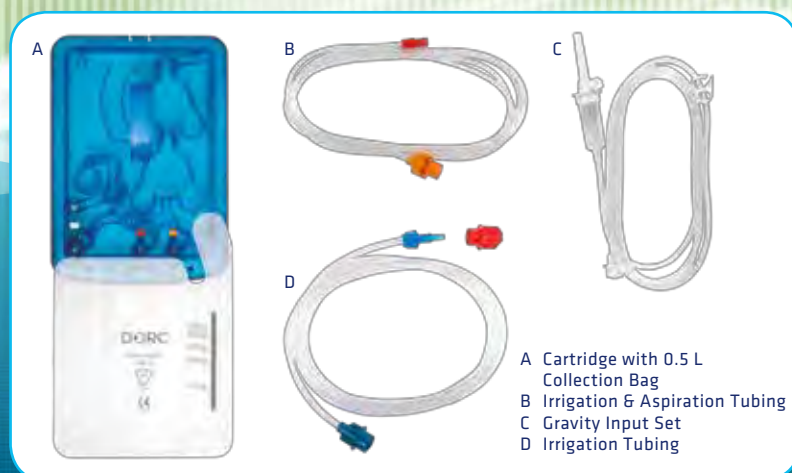
Type	Article #	Content
1.8 mm. incision	8400.18F01	a) 1.8 mm. Triple step <u>flared</u> phaco needle b) 2 x Irrigation Sleeve c) Test chamber for phaco handpiece d) Needle wrench
	8400.18A01	a) 1.8 mm. Triple step <u>angled flared</u> phaco needle b) 2 x Irrigation Sleeve c) Test chamber for phaco handpiece d) Needle wrench
2.2 mm. incision	8400.22F01	a) 2.2 mm. Triple step <u>flared</u> phaco needle b) 2 x Irrigation Sleeve c) Test chamber for phaco handpiece d) Needle wrench
	8400.22A01	a) 2.2 mm. Triple step <u>angled flared</u> phaco needle b) 2 x Irrigation Sleeve c) Test chamber for phaco handpiece d) Needle wrench
	8400.22S01	a) 2.2 mm. <u>Straight</u> phaco needle b) 2 x Irrigation Sleeve c) Test chamber for phaco handpiece d) Needle wrench
2.5 mm. incision	8400.25F01	a) 2.5 mm. Triple step <u>flared</u> phaco needle b) 2 x Irrigation Sleeve c) Test chamber for phaco handpiece d) Needle wrench
	8400.25A01	a) 2.5 mm. Triple step <u>angled flared</u> phaco needle b) 2 x Irrigation Sleeve c) Test chamber for phaco handpiece d) Needle wrench
	8400.25S01	a) 2.5 mm. <u>Straight</u> phaco needle b) 2 x Irrigation Sleeve c) Test chamber for phaco handpiece d) Needle wrench
2.8 mm. incision	8400.28F01	a) 2.8 mm. Triple step <u>flared</u> phaco needle b) 2 x Irrigation Sleeve c) Test chamber for phaco handpiece d) Needle wrench
	8400.28A01	a) 2.8 mm. Triple step <u>angled flared</u> phaco needle b) 2 x Irrigation Sleeve c) Test chamber for phaco handpiece d) Needle wrench



## 8100.CAR01 EVA Cartridge Set

EVA anterior - 8000.ANT01

EVA combined with integrated laser - 8000.COM02



## New Disposable I/A handpieces

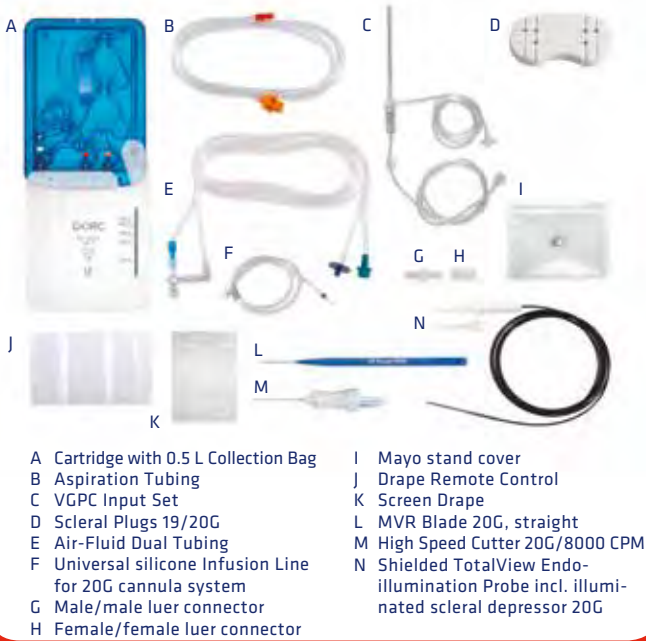


# EVA VR Packs

Available packs: 20/23/25/27Gauge

Also available: EVA Vitrectomy Pack Gravity 20/23/25/27Gauge

## 8300.20G02 EVA Vitrectomy Pack VGPC 20G



## 8300.23G02 EVA Vitrectomy Pack VGPC 23G



## 8300.25G02 EVA Vitrectomy Pack VGPC 25G



## 8300.27G02 EVA Vitrectomy Pack VGPC 27G



# EVA Customized Packs & additional consumables

Several packs available: more information at [www.evabydorc.com/packs](http://www.evabydorc.com/packs)

Please ask your sales manager for further details about disposables and EVA Custom Packs.



# Absolute control...

## EVA in Vacuum or Flow mode...

No longer do surgeons have to choose between the imperfections inherent in either peristaltic or venturi pumps.

The aspiration system of EVA is based on the peristaltic principle but does not work like traditional roller pumps. The EVA flow mode is like a peristaltic mode, but without the pulsatile vacuum and with a precision of 0.1 cc. [SEE DIAGRAM 1](#)

The EVA vacuum mode is like a venturi mode, but can be very fast in the buildup of the vacuum compared to other systems (0.3s). [SEE DIAGRAM 2](#)

Besides these benefits, the strength of the EVA aspiration system is also in the fact that it is possible to switch between the two modes during the surgery; vacuum or flow.

## Eva in use....

Depending on the stage of the surgical procedure you may want to utilize the vacuum or the flow mode. In general, the vacuum mode is utilized when traction and a fast build up of vacuum is needed to grasp and hold tissue, while the flow mode is utilized for maximum control and delicacy. Of course the preference of the surgeons must be taken into account, making use of the mode they are more comfortable with.

## For VitreoRetinal procedures, posterior hyaloid lifting...

For lifting the posterior hyaloid the vacuum mode could be used to quickly grasp and hold it during the lifting. Due to the quick vacuum response time, the vacuum is created in a short time and the posterior hyaloids can be lifted.

## Peripheral Vitrectomy / Vitrectomy near a mobile retina...

When vitrectomy is applied in the periphery or near a mobile retina it is best to utilize the flow mode. In the flow mode, it does not matter whether the vitrectomy tip is in the vitreous or in the BSS, the aspiration flow will remain the same ensuring a smooth vitrectomy with minimal traction. Unlike the vacuum mode, in the flow mode the flow can be controlled from 0 cc/min, while the vacuum mode always has a minimum flow due to the pressure difference of the irrigation pressure and the minimum vacuum setting.

## EVA VacuFlow VTi technology

Meet EVA, an innovative system for Vitreo-Retinal and Cataract surgery that puts you, the surgeon, in absolute control. EVA VacuFlow VTi (Valve Timing intelligence) is a revolutionary fluid control system that uses pistons and timed valves to control the transportation of fluids in either vacuum or flow modes. The system eliminates the risk of unwanted pulsation and delivers the precise flow or fast vacuum, as required by the surgeon.

Put simply, EVA with VacuFlow VTi technology puts you in absolute control all of the time



DIAGRAM 1: EVA flow mode vs. conventional peristaltic mode

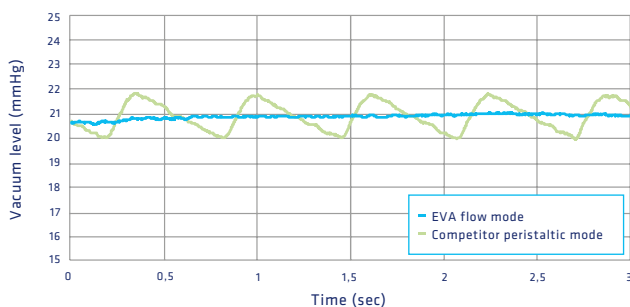
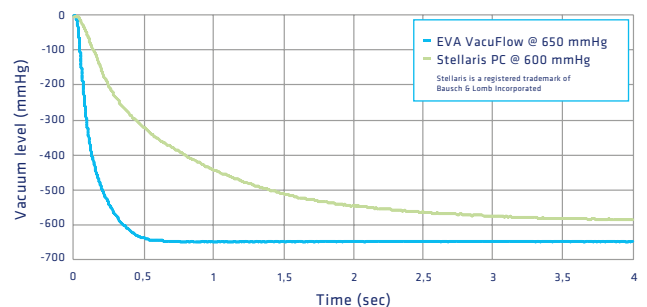


DIAGRAM 2: Vacuum response time





## Active aspiration during a fluid – air exchange...

At the final stage of a fluid air exchange it is highly possible that when aspirating the last drop of BSS the air will be aspirated. Doing this with a vacuum based system can cause high pressure drop in the IOP due to the difference of viscosity of BSS and air. By applying the flow mode a smooth transition between fluid and air is guaranteed because the aspirated flow remains the same for BSS and air. SEE DIAGRAM 3 & 4



## High Speed vitrectomy, 20 – 8000 cpm

Our DORC High speed vitrectomes, available in 20/23/25/27G, are excellent for vitreous removal in the periphery and detached retina to minimize traction. The optimized duty cycle in combination with the VacuFlow VTI delivers an increased precision for flow control vitrectomy.

## Phaco fragmentation...

To remove a dropped nucleus with phaco fragmentation it is best to utilize the flow mode. Compared to the vitrectomy probe the phaco tip has a much larger inner diameter which results in higher flow rates when using the vacuum mode, while using relative low infusion pressure. By using the flow mode the post occlusion surge which occurs when the nucleus fragment is emulsified is significantly less.

## For Cataract procedures, sculpting the nucleus...

With sculpting, a groove is created into the nucleus. At this time the space in the capsular bag is very limited because the nucleus is still in place. During the ultrasound power of the phaco handpiece the emulsified nucleus must be aspirated. Since it is not necessary to grasp and hold the nucleus, and more delicacy is required due to the limited space, the flow mode would best be utilized.

## E(fficiency)-Phaco with triple step phaco needle

Our DORC new phaco pulse mode with 250 pulses per second delivers emulsification efficiency like in continuous mode, but with less ultrasound power. Excellent follow and hold ability of the nucleus parts and maintaining a stable anterior chamber are the result.

DIAGRAM 3: Aspiration 23G vitrectome in BSS @ max mmHg

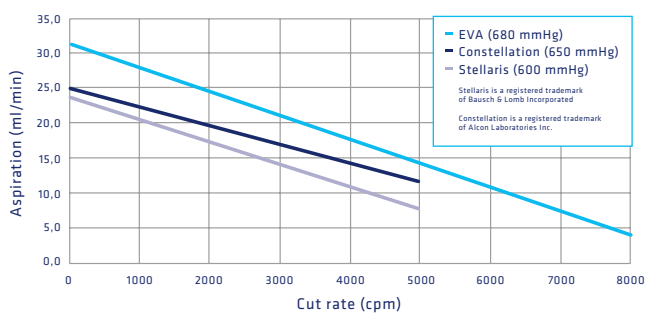
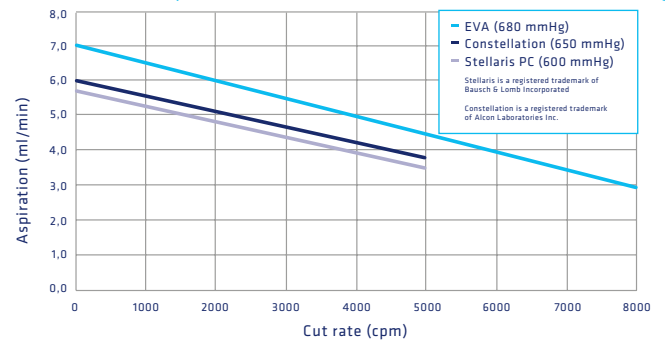


DIAGRAM 4: Aspiration 23G vitrectome in artificial vitreous @ max mmHg



# Risk Management

## LEDStar endo illumination



LEDStar illumination means minimal UV or IR damage to the retina. Furthermore you can control the colour from white to yellow along with the intensity of the light depending on the type of surgery and/or the preference of the surgeon [SEE DIAGRAM 5](#). Due to the longevity you do not have to replace bulbs so the LEDStar offers you a cost effective solution as well (constant output). [SEE DIAGRAM 6 & 7](#)

## AIC

The Automatic Infusion Compensation ensures a stable intraocular pressure during vitreoretinal procedures.

## Laser

Optional integrated green 532 nm laser with wireless foot pedal. Compatible with a wide range of DORC laser probes.

# EVA models

Functionality	EVA Anterior Type nr. 8000.ANT01	EVA Combined Type nr. 8000.COM02
Phaco emulsification	•	•
Diathermy	•	•
Vitreotomy	•	•
VacuFlow VTi	•	•
Integrated IV pole	•	•
LED illumination	•	•
Viscous Fluid Control	•	•
Air fluid exchange	•	•
Vented Global Pressure Control (VGPC)	•	•
Proportional Scissors	•	•
Wireless Foot pedal	•	•
Optional Instrument tray	•	•
Optional 532 nm Laser	•	•

# Effortless to use



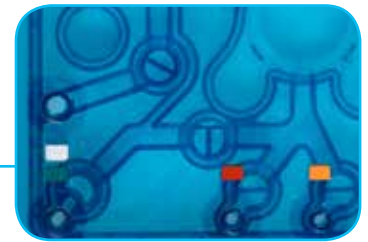
Intuitive interface minimizes human error and is multilingual



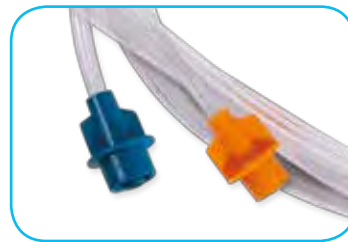
Wireless foot pedal



Frontloaded cartridge



Form and colour coded connectors



Form and colour coded tubing



Optional instrument tray adjustable (height and size) for right or left side of the machine

# Service

EVA is modular serviceable, so risk of downtime is reduced. Please ask your local sales manager for service agreements.

DIAGRAM 5: CIE 1931 x,y chromaticity diagram

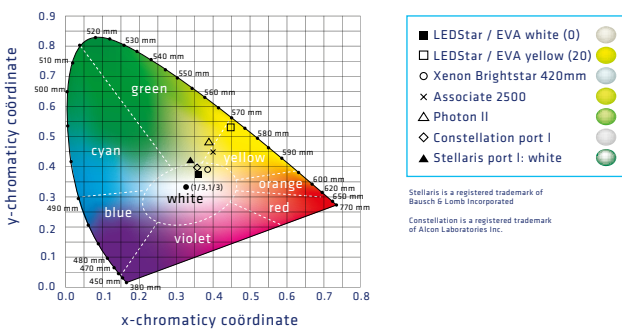
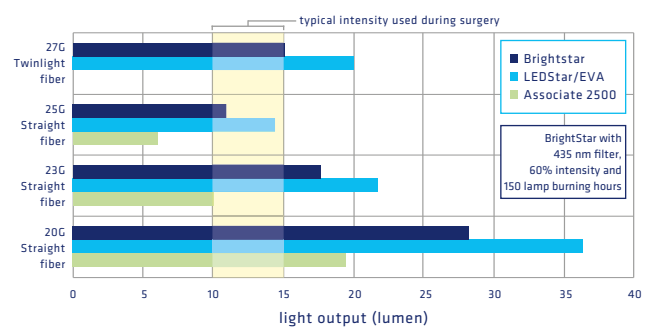


DIAGRAM 6: Light output for different fibers



# Testimonials



## Dr. Ducournau

"You obtain exactly the precise aspiration that you want even at very low aspiration flow levels. EVA has a sound system that speaks to the surgeons allowing them to understand what they are doing. EVA is very modern in every aspect".



## Prof. Eckardt

"A core vitrectomy at 6000 cpm may present an advantage for retinal detachments in which the retina is mobile. The reason is that with higher cut rates there is less traction to the retina. A higher cut rate increases safety, but I do not think it makes the surgery go any faster."



## Dr. Mohr

"VacuFlow is really one of the crown-jewels of the machine. It gives the surgeon in comparison to the competitors a never experienced stability working in far peripheral vitreoretinal interface. The safety profile by working in the periphery of a detached retina will also allow beginners to gain faster confidence with this challenging situation."



## Dr. Pertile

"Another advantage of the EVA system is that it allows me to program in all my settings and I can switch between them with the foot pedal. So I can go from high vacuum to lower vacuum, and to flow control with just my foot. I need no longer a nurse to switch settings and overall I have more control."



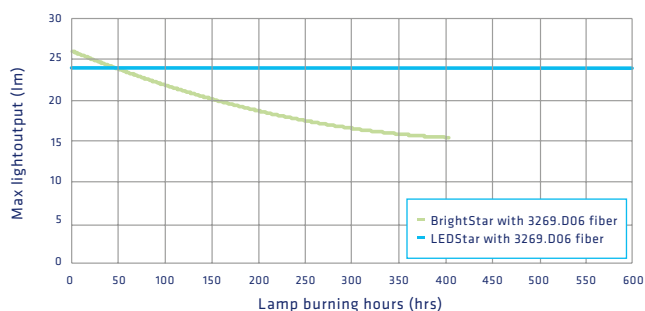
## Prof. Stalmans

"The Automatic Infusion Compensation on the EVA progressively elevates the pressure in the infusion bottle as the aspiration of the vitrector increases. For example, if the baseline pressure is set at 20 mmHg, when the vitrector aspiration increases from 0 mmHg to 350 Hg, the bottle pressure will increase to 40 mmHg. This creates a higher infusion flow and compensates for the amount of fluid that is removed with the vitrector, preventing eye collapse. When aspiration is discontinued from the vitrector, the bottle pressure is automatically lowered back to 20 mmHg. The superiority of the EVA is due to the fast pump reaction time."

## EVA Live Surgery



DIAGRAM 7: Effect of lamp aging on light output - 23G fiber





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