



Gelweave™ Valsalva

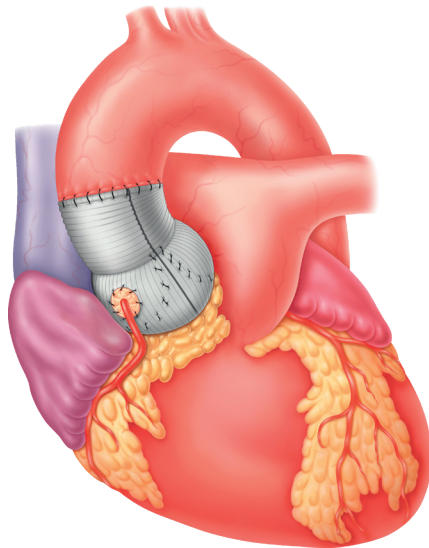
 **TERUMO**
Aortic

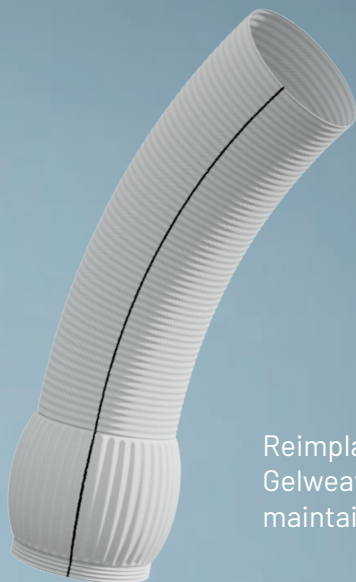
The world's FIRST anatomically designed aortic root graft¹

Valve-Sparing Reimplantation

The Gelweave™ Valsalva Sinus Design

- features a **15 year** clinical history⁴
- closely matches aortic root anatomy¹
- effectively mimics² and generates the 3 independent sinuses of Valsalva⁵
- more physiologic valve motion³
- provides the potential to reduce tension on the coronary anastomoses³
- potential for increased valve longevity⁶



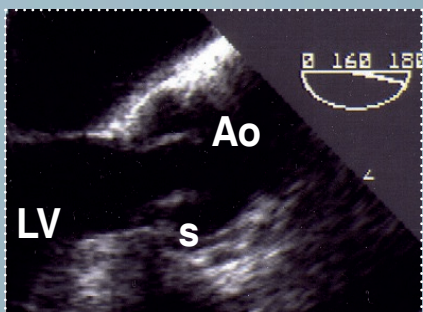


The sinotubular junction and sinuses of Valsalva are crucial for the normal functioning of the valve¹

Reimplantation with the Gelweave™ Valsalva graft maintains annular stability⁷

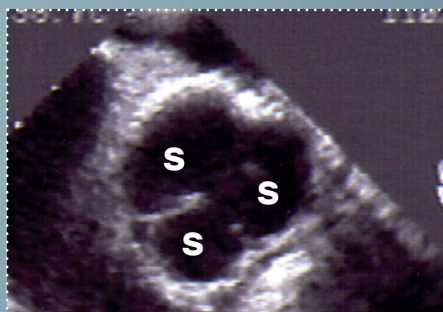
Valve-Sparing Reimplantation

Postoperative Gelweave™ Valsalva graft sinus geometry



Long axis view of the aortic root during systole showing sinus geometry and space between the valve leaflets and graft wall.

(LV = left ventricle, S = sinus, Ao = aorta)



Short axis view of the sinus region during diastole illustrating the presence of 3 discrete sinuses (S).

*Images courtesy of Professor Ruggero De Paulis,
Dept of Cardiac Surgery, European Hospital, Rome, Italy*

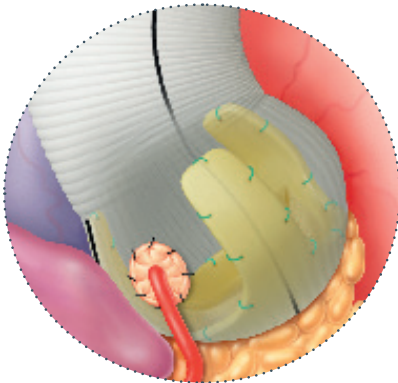
Biological Bentall Procedures

The graft design enables stentless and stented biological valve conduits to be created^{8,9} resulting in a more physiologic flow pattern.²

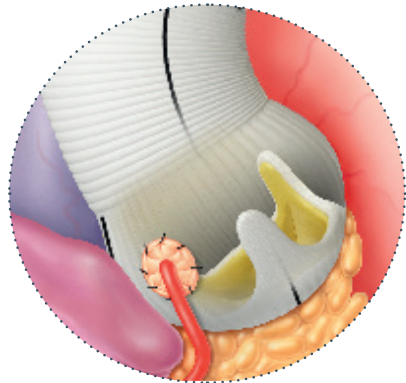
The Gelweave™ Valsalva Sinus Design

- allows a space to be created between stented valve struts and the graft wall minimising the potential of coronary button complications⁸
- provides the potential to reduce tension on the coronary buttons^{8,9}
- reduces the risk of leaflet contact with the graft wall during systole⁹
- potential for increased valve longevity⁹

Implanted assembled biological valve conduits



Representative image of Gelweave™ Valsalva graft with stentless valve added *in situ*



Representative image of Gelweave™ Valsalva graft with stented valve added *in situ*

“The ability of the [Gelweave™] Valsalva graft to provide independent sinuses of normal shape and dimension makes the reimplantation procedure applicable to virtually every patient. This, in turn, will result in improved standardisation and greater reproducibility of the results”⁵



Product Ordering Information

BORE SIZE mm	MAX SKIRT DIAMETER mm	BODY LENGTH cm	SKIRT LENGTH mm	COLLAR LENGTH mm	CATALOGUE NO.
16	21	15	16	10	730016ADP
18	24	15	18	10	730018ADP
20	26	15	20	10	730020ADP
22	28	15	22	10	730022ADP
24	32	15	24	10	730024ADP
26	34	15	26	10	730026ADP
28	36	15	28	10	730028ADP
30	38	15	30	10	730030ADP
32	42	15	32	10	730032ADP
34	44	15	34	10	730034ADP



References

1. De Paulis R, *et al.* A New Aortic Dacron Conduit for Surgical Treatment of Aortic Root Pathology. *Ital Heart J*, 2000, 7, 457-463.
2. Schoenhoff FS, *et al.* The Role of the Sinuses of Valsalva in Aortic Root Flow Dynamics and Aortic Root Surgery: Evaluation by Magnetic Resonance Imaging. *J Heart Valve Dis*, 2009, 18, 380-385.
3. De Paulis R *et al.* One-year Appraisal of a New Aortic Root Conduit with Sinuses of Valsalva. *J Thorac Cardiovasc Surg*. 2002 Jan;123(1):33-9.
4. De Paulis R *et al.* Long Term Results of the Valve Reimplantation Technique using a Graft with Sinuses. *J Thorac Cardiovasc Surg*. 2015. 1-8.
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6. De Paulis R, *et al.* Analysis of Valve Motion After the Reimplantation Type of Valve-Sparing Procedure (David 1) with a New Aortic Root Conduit. *Ann Thorac Surg*, 2002, 74, 53-57.
7. Patel, *et al.* Valve-sparing Aortic Root Replacement: Early Experience with the De Paulis Valsalva Graft in 51 patients. *Ann Thorac Surg* 2006; 82:548-553.
8. Tabata M, *et al.* Modified Bentall Operation with Bioprosthetic Valved Conduit: Columbia University Experience. *Ann Thorac Surg*, 2009, 87, 1969-1970.
9. Stewart AS, *et al.* Modified Bentall Operation with a Novel Biologic Valved Conduit. *Ann Thorac Surg*, 2010, 89, 938-942.



Product availability subject to regulatory approval.

 **TERUMO**
Aortic

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