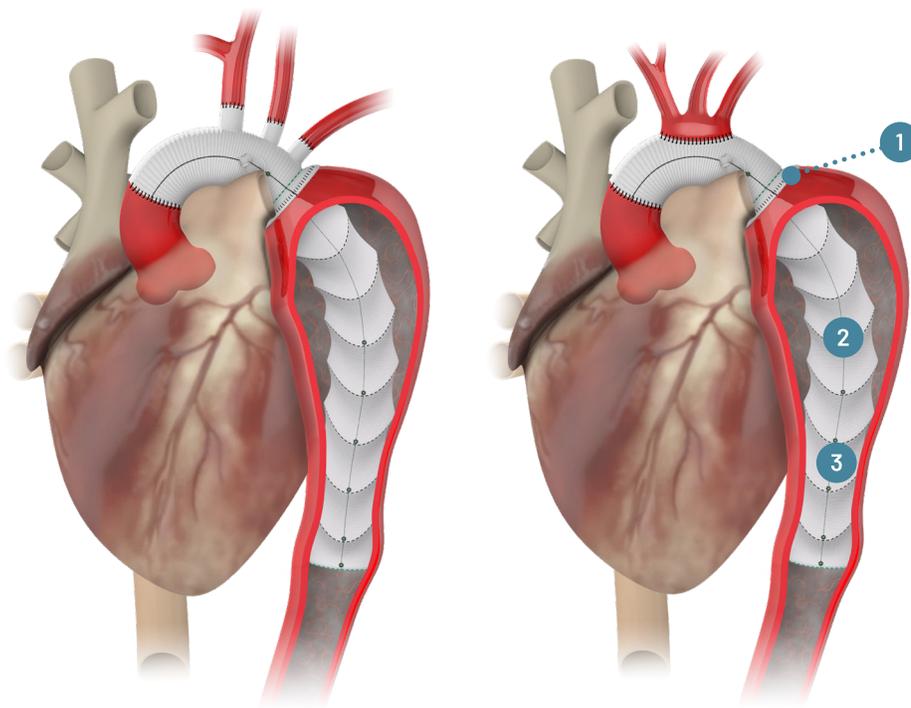


 **thoraflex™ hybrid**

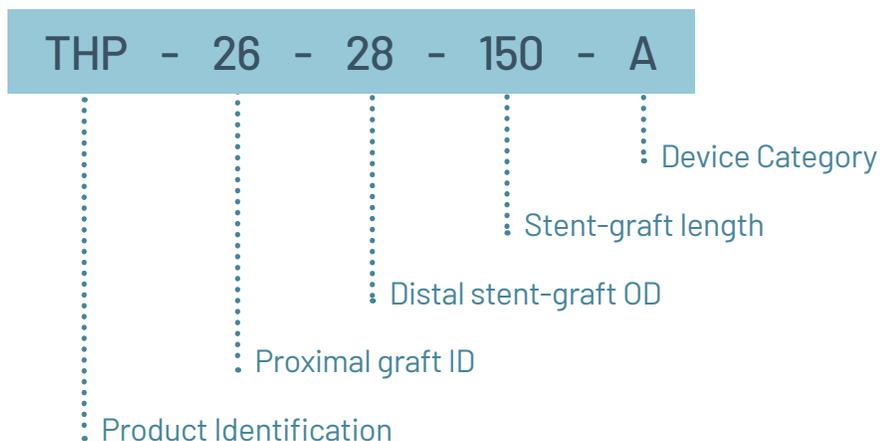
 **TERUMO**
Aortic

The **world's first multi-branched** Frozen Elephant Trunk Device with Plexus & Ante-Flo™ configurations for individual arch vessel reconstruction or the Island Technique



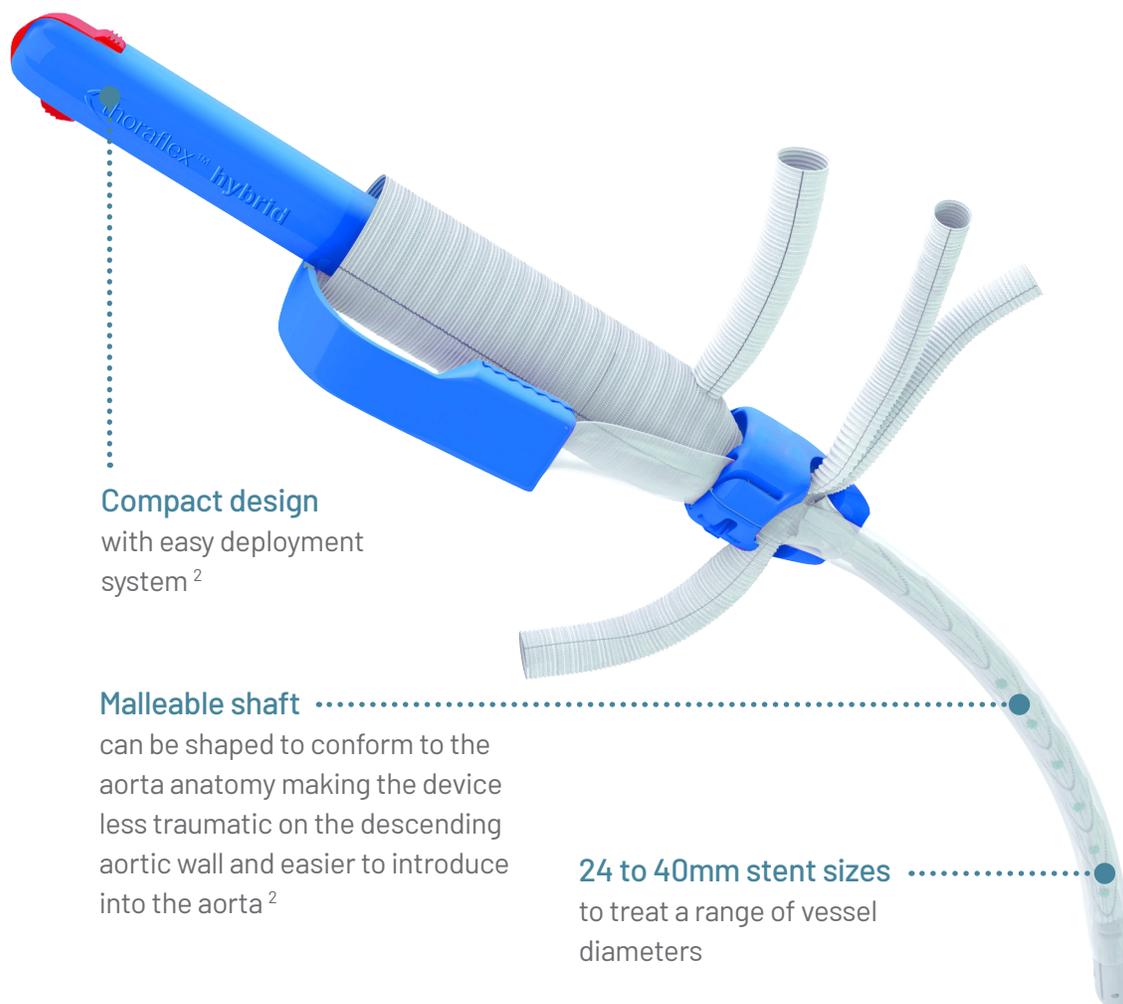
- 1 Gelweave™ Siena Collar ensures easier and safer anastomosis of the prosthesis to the aorta reducing the hemodynamic traction on the anastomosis ¹
- 2 24 to 40mm stent options
- 3 Radiopaque markers simplify secondary procedures if needed ¹
- ⌚ Earlier re-warming, reduced myocardial ischemia, lower body ischemia & operating times ^{1,2,3,4}
- ↔ Compact design with easy deployment system ¹
- ① Potential for one-stage operation ⁵

Catalog Number Explanation



1. Ruggieri VG *et al.* Multibranch hybrid device for frozen elephant trunk: what does it change? *J Thoracic & Cardiovasc Surg*, July 2015; 15(1), 253-255.
 2. Di Marco L *et al.* The Thoraflex™ Hybrid frozen elephant trunk device: the Bologna experience. *J Vasc Endovasc Surg*, 2014; 21(3), 117-23.
 3. Maselli D *et al.* Frozen elephant trunk with Thoraflex™ Hybrid prosthesis: early results of the prospective THORA-FET registry. *AATS Aortic Symposium*, May 2016, NY, USA.
 4. Shrestha M *et al.* Total aortic arch replacement with a novel 4-branched frozen elephant trunk prosthesis: single-centre results of the first 100 patients. *J Thoracic and Cardiovasc Surg*, July 2016; 152(1), 148-159.
 5. Mariscalco G *et al.* Reflection from UK Aortic Group: Frozen Elephant Trunk Technique as Optimal Solution in Type A Acute Aortic Dissection. *Semin Thoracic Surg*, 2019; 31:686-690.

Plexus and Ante-Flo designs enable a choice of surgical techniques and widen the treatable patient population



Compact design
with easy deployment
system²

Malleable shaft
can be shaped to conform to the
aorta anatomy making the device
less traumatic on the descending
aortic wall and easier to introduce
into the aorta²

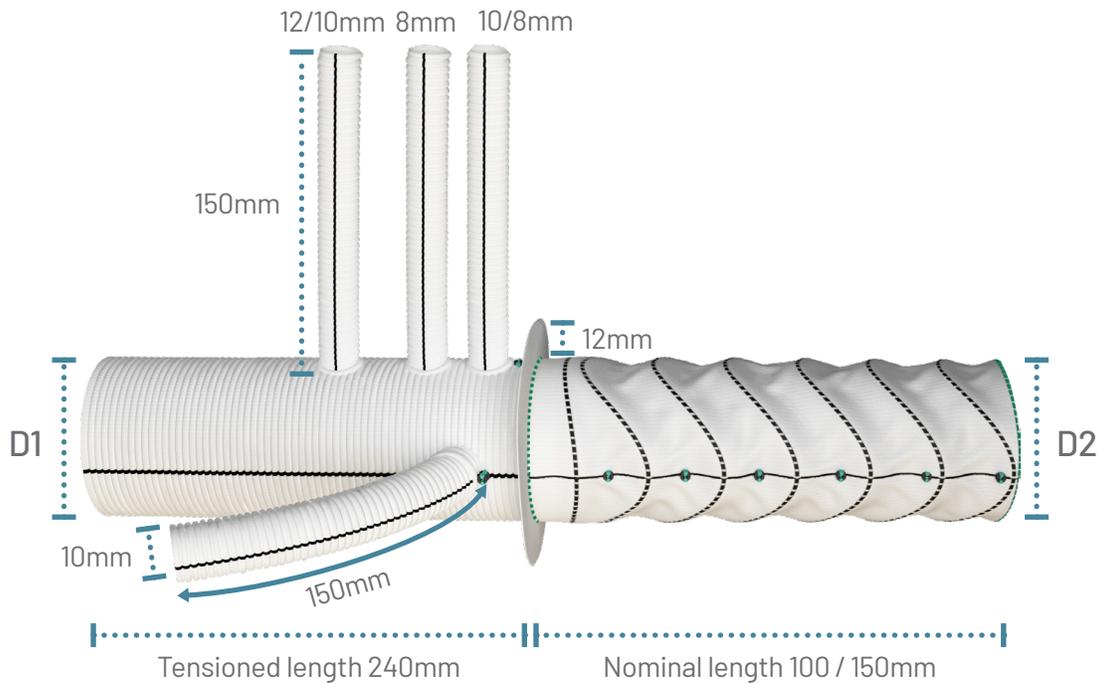
24 to 40mm stent sizes
to treat a range of vessel
diameters

1. Di Marco L et al. The Thoraflex™ Hybrid frozen elephant trunk device: the Bologna experience. *J Vasc Endovasc Surg*, 2014; 21(3), 117-23.
2. Ruggieri VG et al. Multibranching hybrid device for frozen elephant trunk: what does it change? *J Thoracic & Cardiovasc Surg*, July 2015; 15(1), 253-255.

Plexus Product Ordering Information

Catalog Number	Graft ID - D1 (mm)	Stent-graft OD - D2 (mm)	Catalog Number	Graft ID - D1 (mm)	Stent-graft OD - D2 (mm)
THP2224x100A [#]	22	24	THP2224x150A [#]	22	24
THP2426x100A [#]	24	26	THP2426x150A [#]	24	26
THP2628x100A	26	28	THP2628x150A	26	28
THP2830x100A	28	30	THP2830x150A	28	30
THP3032x100A	30	32	THP3032x150A	30	32
THP3034x100A	30	34	THP3034x150A	30	34
THP3036x100A	30	36	THP3036x150A	30	36
THP3038x100A	30	38	THP3038x150A	30	38
THP3040x100A	30	40	THP3040x150A	30	40
THP3240x100A	32	40	THP3240x150A	32	40

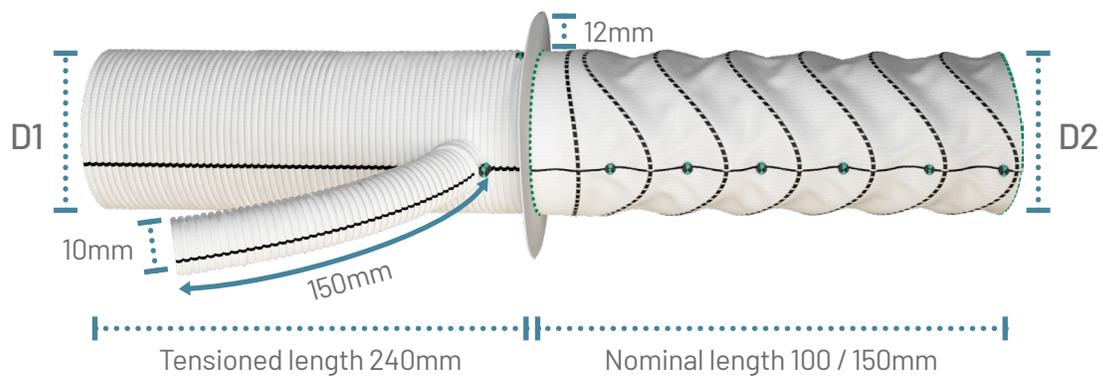
[#] The branches on THP2224x100B, THP2426x100B, THP2224x150B and THP2426x150B are as follows: 10mm, 8mm & 8mm.



Note: drawing not to scale

Ante-Flo™ Product Ordering Information

Catalog Number	Graft ID - D1 (mm)	Stent-graft OD - D2 (mm)	Catalog Number	Graft ID - D1 (mm)	Stent-graft OD - D2 (mm)
THA2224x100A	22	24	THA2224x150A	22	24
THA2426x100A	24	26	THA2426x150A	24	26
THA2628x100A	26	28	THA2628x150A	26	28
THA2830x100A	28	30	THA2830x150A	28	30
THA3032x100A	30	32	THA3032x150A	30	32
THA3034x100A	30	34	THA3034x150A	30	34
THA3036x100A	30	36	THA3036x150A	30	36
THA3038x100A	30	38	THA3038x150A	30	38
THA3040x100A	30	40	THA3040x150A	30	40
THA3240x100A	32	40	THA3240x150A	32	40



Note: drawing not to scale

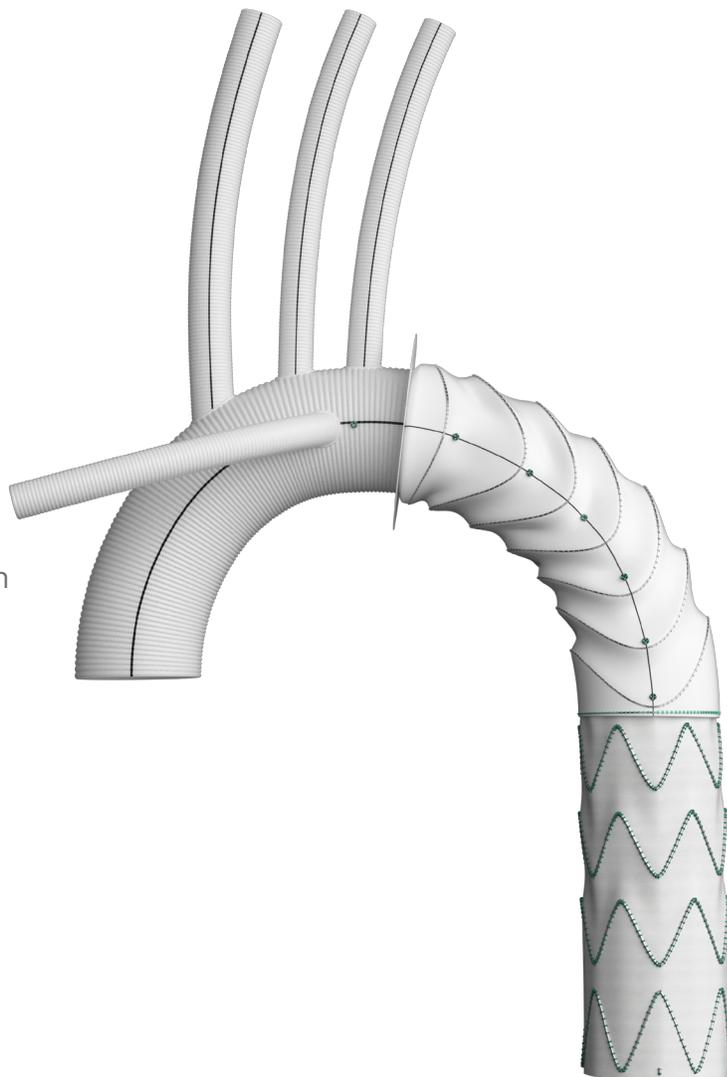
Relay[®]Pro - approved extension device for Thoraflex[™] Hybrid

With **up to 32% of FET repairs needing a future downstream intervention**,¹ Thoraflex[™] Hybrid is **indicated to be extended** with the Relay[®]Pro device, to complete the downstream endovascular repair.

Relay[®]Pro is the ideal solution to treat patients with disease progression following Frozen Elephant Trunk Repair using Thoraflex Hybrid due to:

- ▶ NBS (non-bare stent) configurations
- ▶ Low-profile sheath

“Downstream TEVAR following the FET procedure is associated with excellent clinical outcomes. We thus maintain that staging thoracic aortic repair-FET and secondary TEVAR-is a very successful and safe strategy.”²



1. Ho J et al. Total Aortic Arch Replacement and Frozen Elephant Trunk. *Seminars in Thoracic and Cardiovascular Surgery* 2020; 33. 10.1053/j.semtcvs.2020.11.016
2. Kreibich M, et al. Downstream thoracic endovascular aortic repair following zone 2, 100-mm stent graft frozen elephant trunk implantation. *Interactive Cardiovascular and Thoracic Surg.* (2021) 1-6 doi: 10.1093/icvts/ivab338.



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Aortic



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from the aortic root to the iliacs.

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Product availability subject to local regulatory approval.



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