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DES platforms: design by size and expansion limits

Know your platform before you post-dilate: the cell design changes with diameter, and every platform has a maximum safe expansion.

1 Platform design changes with stent diameter

Each diameter band uses a different crown and connector design, which sets how far the stent can be expanded.

Ø mm	Synergy	Xpedition	Resolute Onyx	Ultimaster	BioMatrix Alpha	Orsiro
2.25	**Small vessel** 8 crowns · 2–4 connectors	**Small vessel** 6 crowns · 3 connectors	**Small vessel** 6.5 crowns · 2 connectors	**Small vessel** 8 crowns · 2 connectors	**Small vessel** 6 crowns · 2 connectors	**Small vessel** 6 crowns · 3 connectors
2.50						
2.75			**Medium vessel** 8.5 crowns · 2 connectors			
3.00	**Workhorse** 8 crowns · 2–4 connectors					
3.50		**Large vessel** 9 crowns · 3 connectors	**Large vessel** 9.5 crowns · 2.5 connectors	**Large vessel** 8 crowns · 2 connectors	**Large vessel** 9 crowns · 3 connectors	**Large vessel** 6 crowns · 3 connectors
4.00	**Large vessel** 10 crowns · 2–5 connectors					
4.50–5.00	—	—	**Extra-large** 10.5 crowns · 2.5 connectors	—	—	—

2 Expansion range by platform

Minimal expansion = diameter at low pressure; maximal overexpansion = the on-label upper limit when post-dilating.

PLATFORM	NOMINAL SIZES	MINIMAL EXPANSION Ø	MAX OVEREXPANSION (ON-LABEL)
Xience Skypoint Abbott	2.0–3.25 mm	**2.05 mm** 2.0 mm @ 8 atm	**3.75 mm**
	3.5–5.0 mm	**3.36 mm** 3.5 mm @ 8 atm	**5.75 mm**
Onyx Frontier Medtronic	2.0–2.5 mm	**1.89 mm** 2.0 mm @ 7 atm	**3.00 mm**
	2.75–3.0 mm	**2.50 mm** 2.75 mm @ 7 atm	**4.00 mm**
	3.5–4.0 mm	**3.20 mm** 3.5 mm @ 7 atm	**5.00 mm**
	4.5–5.0 mm	**4.10 mm** 4.5 mm @ 7 atm	**6.00 mm**
Ultimaster Nagomi Terumo	2.0–2.5 mm	**1.84 mm** 2.0 mm @ 7 atm	**3.50 mm**
	2.75–3.0 mm	**2.56 mm** 2.75 mm @ 7 atm	**4.50 mm**
	3.5–4.5 mm	**3.26 mm** 3.5 mm @ 7 atm	**6.25 mm**
Synergy XD Boston Scientific	2.25–2.75 mm	**2.05 mm** 2.0 mm @ 8 atm	**3.50 mm**
	3.0–3.5 mm	**3.05 mm** 3.0 mm @ 8 atm	**4.25 mm**
	4.0 mm	**3.88 mm** 4.0 mm @ 8 atm	**5.75 mm**
Synergy Megatron Boston Scientific	3.5–5.0 mm	**3.18 mm** 3.5 mm @ 8 atm	**6.00 mm**

For education only. Compiled from manufacturer data; designs and limits change between generations. Always check the current instructions for use before exceeding nominal size.

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