Markforged

FFF PRINTER COMPARISON GUIDE

ADDITIVE X

	Onyx Pro	Mark Two	X7	FX10	FX20

Hardware

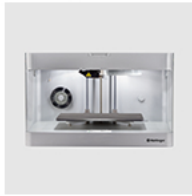|	Onyx Pro	Mark Two	X7	FX10	FX20
Build Volume:	320 x 132 x 154mm (6.5L)	320 x 132 x 154mm (6.5L)	330 x 270 x 200mm (17.8L)	375 x 300 x 300mm (33.8L)	525 x 400 x 400mm (84L)
Print Bed:	Flat to within 160 µm; Kinematic coupling and Manual shim levelling	Flat to within 160 µm; Kinematic coupling and Manual shim levelling	Flat to within 80 µm; Kinematic coupling, Manual laser-assisted levelling	Heated, Precision-ground aluminium vacuum bed, Auto levelling	Precision- ground aluminium bed, Auto levelling
Z Resolution Range:	100-200 µm	100-200 µm	50-250 µm	125-250 µm	50-250 µm
Build Chamber:	Not Heated	Not Heated	Not Heated	Heated up to 60°C	Heated up to 200°C
Material Storage:	Outboard dry box, 800cc spool.	Outboard dry box, 800cc spool.	Inboard dry box, 800cc spool.	Humidity controlled material drawer, 4 spool bays, 800cc spools.	Humidity controlled material drawer, 4 spool bays, 3200cc spools.
Supports:	Same material breakaway supports	Same material breakaway supports	Same material breakaway supports	Same material breakaway supports	Same material breakaway supports (Onyx) Dedicated breakaway support (Ultem™ Filament and Vega)
Infill:	Closed-cell infill; Multiple geometries available	Closed-cell infill; Multiple geometries available	Closed-cell infill; Multiple geometries available	Closed-cell infill; Multiple geometries available	Closed-cell infill; Multiple geometries available

Specifications

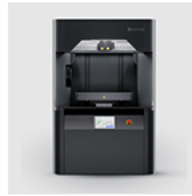|	Onyx Pro	Mark Two	X7	FX10	FX20
Storage:	Cloud included, Offline available	Cloud included, Offline available	Cloud included, Offline available	Cloud included, Offline available	Cloud included, Offline available
Power:	100-240 VAC, 150W (2A Peak)	100-240 VAC, 150W (2A Peak)	100-240 VAC, 150W (2A Peak)	100-120 VAC, 12A or 200-240 VAC, 6A	200-240VAC 3P+E, 24A or 347-416VAC 3P+N+E, 14A; 8 kW
Weight:	16KG	16KG	48KG	109KG	530KG
Footprint:	584 x 330 x 355 mm	584 x 330 x 355 mm	584 x 483 x 914 mm	760 x 640 x 1200 mm	1352 x 900 x 1925 mm

	Onyx Pro	Mark Two	X7	FX10	FX20
	Enquire Now	Enquire Now	Enquire Now	Enquire Now	Enquire Now

Engineering Thermoplastics

Compatible:	Onyx Precise PLA Smooth TPU 95A	Onyx Nylon Precise PLA Smooth TPU 95A	Onyx Nylon Onyx ESD Precise PLA Onyx FR Smooth TPU 95A	Onyx	Onyx ULTEM 9085 Filament Onyx ESD Vega Onyx FR

Continuous Fibres

Compatible:	Continuous Fibreglass	Continuous Fibreglass, Continuous Carbon Fibre, Continuous HSHT Fibreglass, Continuous Aramid Fibre	Continuous Fibreglass, Continuous Carbon Fibre, Continuous Carbon Fibre FR, Continuous HSHT Fibreglass, Continuous Aramid Fibre	Continuous Carbon Fibre	Continuous Fibreglass, Continuous Carbon Fibre, Continuous Carbon Fibre FR, High Temperature Carbon Fibre, Continuous Aramid Fibre

Advanced Features

Detection:	Out of Plastic Detection and Fibre Jam Detection.	Out of Plastic Detection and Fibre Jam Detection.	Out of Plastic Detection, Fibre Jam Detection, Out of Fiber Detection and Adaptive Bed Levelling.	Out of Plastic Detection, Fibre Jam Detection, Out of Fibre Detection, Adaptive Bed Levelling and Automated Bed Levelling.	Out of Plastic Detection, Fibre Jam Detection, Out of Fibre Detection, Adaptive Bed Levelling, Automated Bed Levelling and Micron Precision Linear Encoders.
Max Speed:	Max Speed: 1x	Max Speed: 1x	Max Speed: 2x	Max Speed: 4x	Max Speed: 4x
Inspection:	Not Compatible	Not Compatible	Compatible	Compatible	Compatible