

Specification of Sub-surface engraving machine			
	PHANTOM I	PHANTOM II	SUPER JET
Specification of Productivity			
size of glass (W x L x H), maximum	240 x 240 x 120 mm (9.45 x 9.45 x 4.72 inches)	150 x 150 x 120 mm (5.91 x 5.91x 4.72 inches)	750 x 450 x 30 mm (29.53 x 17.72 x 1.12 inches)
size of engraved image (W x L x H), maximum	65 x 65 x 80 mm (2.56 x 2.56 x 3.15 inches)	80 x 80 x 80 mm (3.15 x 3.15 x 3.15 inches)	700 x 400 x 30 mm (27.56 x15.75 x 1.12 inches)
actual maximum engraving speed *	1000points/s	1000points/s	2000points/s
point size inside the glass	50 - 150 μm	50 - 150 μm	50 - 150 μm
Typical time for engraving,examples			
3D-portrait in glass,210,000points	4.5min	4.5min	--
2D-Multiplayer Bitmap in glass,80mm(L)*65mm(W),530,000points	8.8min	8.8min	8.8min
2D-Multiplayer Bitmap in glass,180mm(L)*150mm(W),2,600,000points	--	--	30min
Laser specifications			
diode side-pumped solid state laser	*	*	*
cooling	water	water	water
wavelength	532 nm (green)	532 nm (green)	532 nm (green)
max. pulse energy	2.4mJ	2.4mJ	2.4mJ
max. laser power	2.4 W	2.4 W	2.4 W
Distance between lens and focus point (in air)	150 mm (5.91 inches)	145mm (5.71 inches)	35 mm (1.38 inches)
lifetime of laser diodes	10,000 hrs.	10,000 hrs.	10,000 hrs.
guarantee for laser diodes	12 months	12 months	12 months
Laser class of the laserhead (acc.to IEC 60825-1)	4	4	4
Other Specifications			
Dimensions of main system (W x H x L)	1100 x 600 x 1250 mm (43.31 x23.62 x 49.21 inches)	820 x 520 x 600mm (32.28x20.47 x23.62 inches)	1200x 800 x 950 mm (47.24 x 31.5 x 37.4 inches)
weight of main system	250 kg	100 kg	200 kg
Dimensions of controlingsystem (W x H x L)	--	--	570 x660 x780 mm (22.44 x25.98 x 30.71 inches)
weight of controlling system	--	--	98 kg
Dimensions of cooling system (W x H x L)	390 x680 x750 mm (15.35 x26.77 x 29.53 inches)	390 x680 x750 mm (15.35 x26.77 x 29.53 inches)	390 x680 x750 mm (15.35 x26.77 x 29.53 inches)
weight of cooling system	68 kg	68 kg	68 kg
Power supply input	110-220V / 50-60Hz	110-220V / 50-60Hz	110-220V / 50-60Hz
power consumption, maximum	2 KW	2 KW	2 KW
Environmental operating temperature	15 to 30 ° C	15 to 30 ° C	15 to 30 ° C
Environmental storage temperature	-20 to 45° C	-20 to 45° C	-20 to 45° C
Environmental humidity (non-condensing)	10 - 60 %	10 - 60 %	10 - 60 %
Laser class, complete system (acc.to IEC 60825-1) **	1	1	1
Eye protection, OD 6, 532 nm, included	*	*	*
Options			
3D-camera available	*	*	--