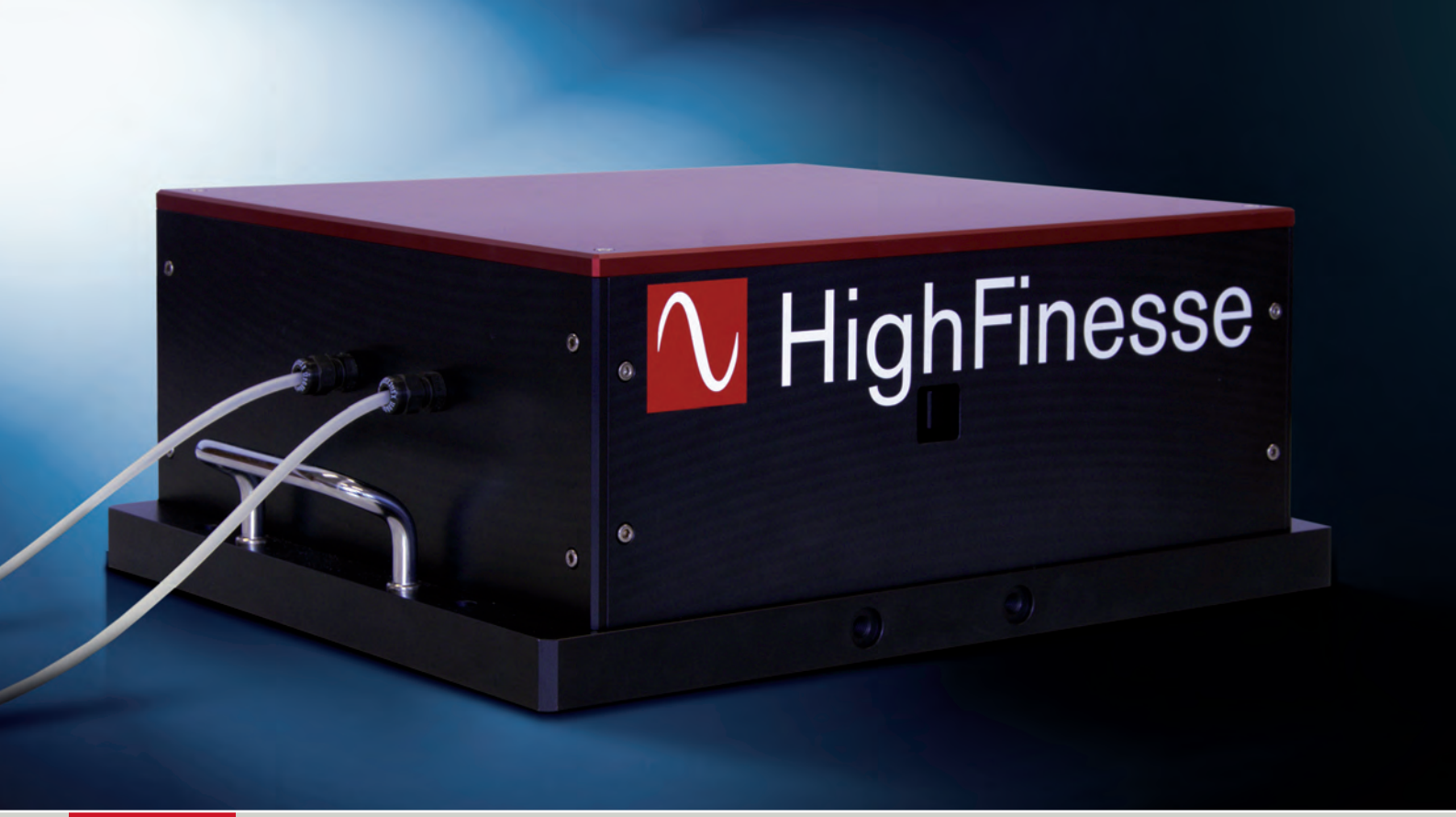

NEW: TS:precise – cw Ti:sapphire laser*

- Perfect beam parameters
- Modular design
- Easy to use: almost no user adjustments needed
- Stand alone device with integrated pump source and SHG
- Robust and compact design
- Unique patent pending slides technology and dedusting unit

HighFinesse
Laser and Electronic Systems

* Picture may differ from original product.

CW Titanium:Sapphire Laser

Innovative SINGLE+ Ti:Sapphire Laser Technology* for scientific and industrial applications.

Laser specifications	TS:precise
Modes of operation	Single mode (with filter cavity)
	Single mode plus two sidebands with adjustable power ratio (carrier/sideband separation 2 GHz)
	Two mode operation – advantageous for second harmonic generation
Enhanced efficiency	Significantly enhanced output power as compared with conventional technologies
In combination with HighFinesse Second Harmonic Generation	Up to a factor of six enhanced harmonic power as compared with conventional technologies
Tunability	Full Ti:Sapphire range
Compact, robust design	Drastically simplified alignment due to SINGLE+ Technology*
In combination with HighFinesse wavelength meters	Absolute optical frequency control with an accuracy to below 1 MHz
Applications	Single and multiple frequency high resolution laser spectroscopy
	Laser cooling (the most universal and powerful source for this application)
	Optical lattices, optical tweezers and dipole traps (Two mode operation allows for doubling the trap depth)
	Spectroscopy on biological and chemical samples
	Environmental analysis

* The unique SINGLE+ Ti:Saphire Laser Technology developed by HighFinesse introduces a new quality and performance regime for Ti:Saphire laser products. The fundamentally new laser design avoids intracavity optical isolators and etalons and thereby reaches improved output power, compact design and high reliability.

TS:precise with SINGLE+ Ti:Sapphire Laser Technology

System specifications		TS:precise
Output power	6 W pump	> 2000 mW
	5 W pump	> 1600 mW
	4 W pump	> 1000 mW
	3 W pump	> 680 mW
	2 W pump	> 340 mW
Harmonic output power	6 W pump	> 1000 mW
	5 W pump	> 640 mW
	4 W pump	> 360 mW
	3 W pump	> 160 mW
	2 W pump	> 40 mW
Optical output power noise		< 1 %
Tunability		700 – 1040 nm and 350 – 520 nm *
Single mode scanning range	slow / fast rate	1 Hz: > 20 GHz / 1 kHz: > 1.5 GHz
Linewidth		< 50 kHz
Spatial mode		TEM_{00}
		Rayleigh length: 50 mm
		Beam divergence: 2.2 mrad (half angle)
		Beam waist radius: 0.11 mm
Polarization		Horizontal
Laser head dimensions	(LxWxH)	400 × 450 × 150 mm / 157 × 177 × 59 ''
Control unit dimensions	(LxWxH)	310 × 465 × 100 mm / 121 × 183 × 39 ''
Operating voltage	Volt	110 ± 5 % / 230 ± 5 %
Cooling requirements		Closed loop chiller included
External frequency control		Analog/digital/computer/absolute wavelength control
Pump laser		Laser Quantum Finesse
Ambient temperature range		15 to 30 °C

* In combination with HighFinesse Second Harmonic Generation

HighFinesse
Laser and Electronic Systems

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