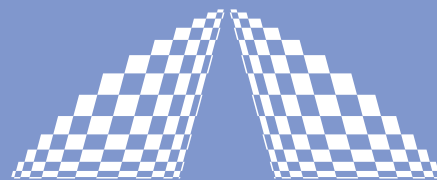


FEMTOCONTROL



A P E

PULSE COMPRESSOR / PRE-CHIRPER



FemtoControl is a compact motorized dispersion control for optimization of the duration of femtosecond laser pulses in the spectral range of Ti:Sapphire lasers*).

Femtosecond pulses which pass through any kind of optical material experience dispersion that can lead to temporal broadening of the ultrashort pulses with subsequent reduction in peak power. Thus, the experimental conditions are changed and degraded.

FemtoControl compensates for material dispersion by applying the inverse amount of dispersion (or chirp) to the pulse. This is generated by a pair of prisms on motorized translation stages allowing continuous adjustment of the pulse length.

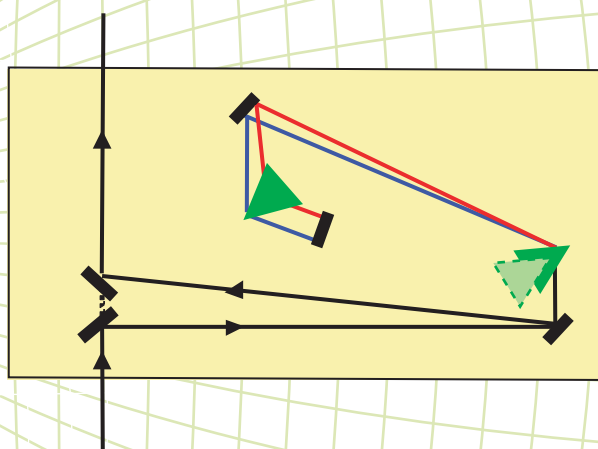
Ideal for Multi-Photon-Microscopy

Wide range of dispersion

User-friendly adjustment and operation

Zero - GVD function

Automatic prism drive corresponding to stored GVD-curves



*) For other laser systems contact APE GmbH

Ultrafast Pulse Diagnostics

Wavelength Conversion

Pulse Management

Acousto-optics

Your Partner in Ultrafast

FEMTOCONTROL

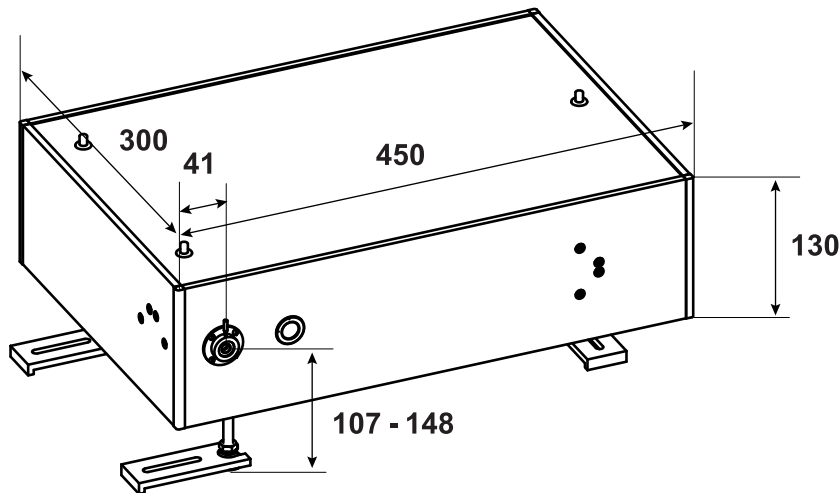
SPECIFICATIONS

Wavelength ranges	680 ... 1080 nm
Max. beam diameter	4 mm
Input polarization	Horizontal (polarization rotator optional)
Minimum laser repetition rate	Any
Max. bandwidth (for complete compensation)	12.5 nm @ 800 nm (\approx 75 fs transform limited Gaussian pulse; higher bandwidth on request)
Transmission	>90% @ 800 nm
Dispersion range	min max
	700 nm: 0 ... - 23000 fs ²
	800 nm: 0 ... - 13000 fs ²
	900 nm: 0 ... - 8000 fs ²
	(more dispersion on request)
Additional internal beam path	1.67 m

OPTION

Dispersion management in combination with APE autocorrelator **Carpe**

DIMENSIONS (in mm)



Application Example:

A transform limited Gaussian input pulse of 100 fs at 800 nm sent into a multi-photon microscope experiences a dispersion of 13000 fs² from the glass of the microscope lens system. This broadens the pulse to 380 fs at the sample position. By placing the **FemtoControl** in front of the microscope the pre-compensation of the dispersion can be adjusted such that the pulse width of 100fs is maintained after passing through the microscope.

At 700 nm a broadening of up to 645 fs, and at 900 nm of up to 245 fs can be compensated, respectively, for a 100 fs transform limited pulse.

Distributors
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APE follows a policy of continued product improvement. Therefore, specifications are subject to change without notice.