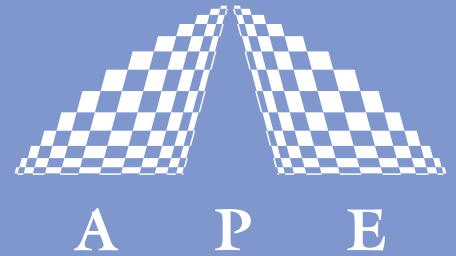


FEMTOCONTROL



PULSE COMPRESSOR / PRE-CHIRPER

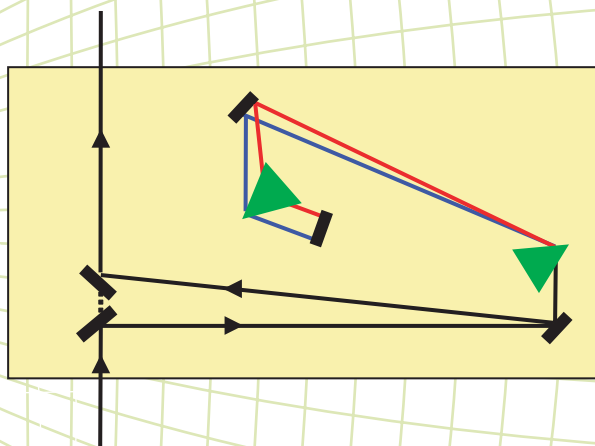


FemtoControl is a compact motorized pulse compressor for user friendly adjustment and optimization of the duration of femtosecond laser pulses in the spectral range of a Ti:Sapphire laser*.

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



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



Ideal for Multi-Photon-Microscopy

Wide range of chirp compensation

User-friendly adjustment and operation

Bypass function

*For other laser systems contact APE GmbH

Laser Diagnostics

Spectral Analysis

Acoustooptics

Non-Linear Optics

Accessories

Your Partner in Ultrafast

FEMTOCONTROL

SPECIFICATIONS

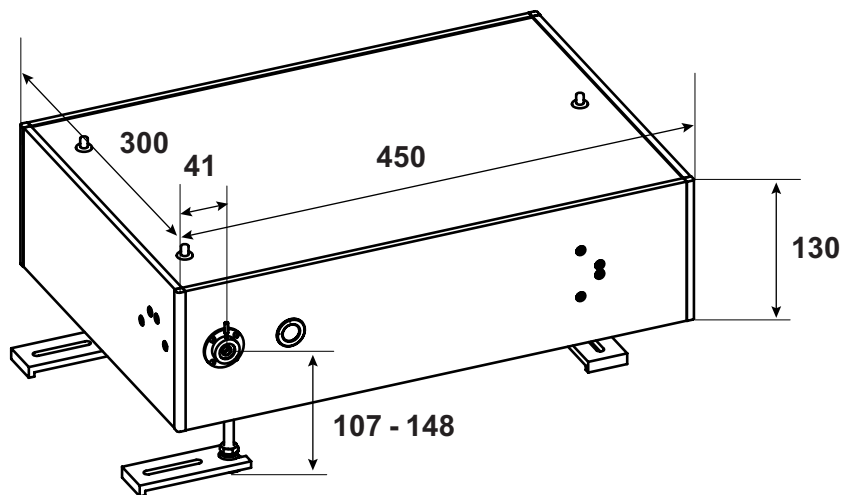
Wavelength ranges	700 ... 930 nm	or	700 ... 1050 nm (optional)
Max. beam diameter	4 mm		
Input polarization	Horizontal (polarization rotator optional)		
Minimum laser repetition rate	Any		
Max. bandwidth (for complete compensation)	12,5 nm @ 800 nm (75 fs transform limited Gaussian pulse; higher bandwidth on request)		
Transmission	>80% @ 800 nm (>90% optional)		
Dispersion	min	max	
	700 nm:	0 ...	-23000 fs ²
	800 nm:	0 ...	-13000 fs ²
	900 nm:	0 ...	-8000 fs ²
	(more dispersion on request)		

CONTROL OPTIONS

Remote control unit or control via autocorrelator **Carpe**

DIMENSIONS (in mm)

Additional internal beam path 1,67 m



Application Example:

Assuming 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. That broadens the pulse to 380 fs at the sample position. **FemtoControl** in front of the microscope is capable of compensation back to 100 fs pulses at the sample.

Distributors
see APE website

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