



## WATT PILOT

CONTINUOUSLY VARIABLE ATTENUATOR  
FOR LINEARLY POLARIZED HIGH POWER LASER BEAMS



ORIGINALLY DEVELOPED  
AND MANUFACTURED  
AT ALTECHNA

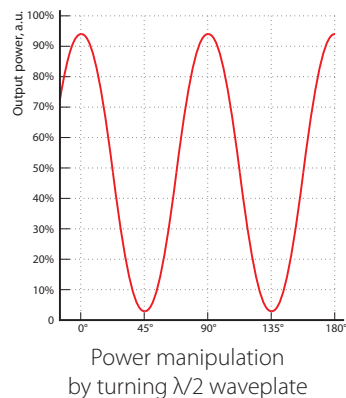


BEST SELLING  
PRODUCT  
IN 2012!

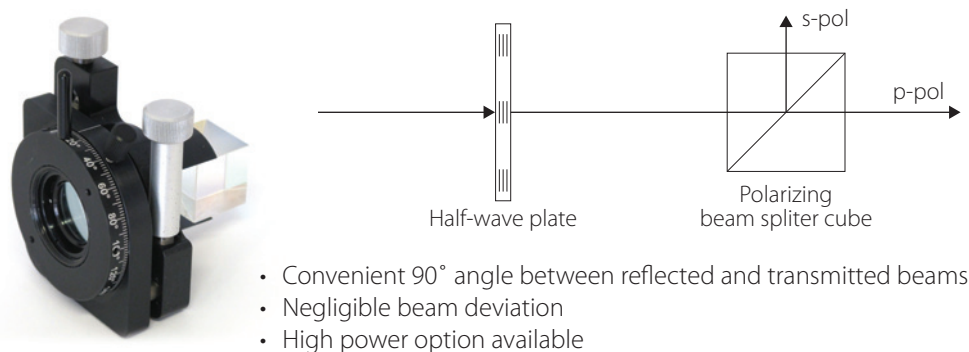
## WATT PILOT

**Watt Pilot** series continuously variable attenuators are based on polarization control of linearly polarized laser beams. These devices consist of a rotating half-wave plate ( $\lambda/2$ ) and thin-film polarizers which are placed in precision optomechanical holder. Each **Watt Pilot** device comes in two different – manual and motorized – versions. The intensity of the laser beam can be controlled over a wide dynamic range by rotating the waveplate. This can be done by hand in manual **Watt Pilot** devices or via special software in motorized **Watt Pilot** devices.

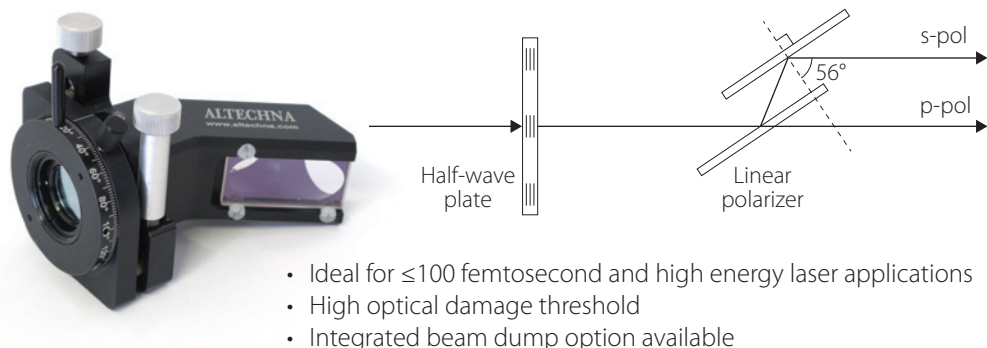
To serve most of currently existing laser sources *Altechna* developed several models of **Watt Pilot** optimized for specific wavelength to achieve maximum efficiency.



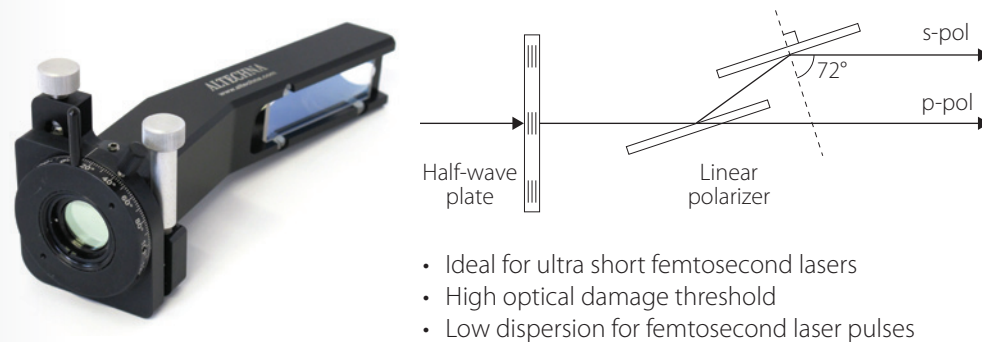
### STANDARD WATT PILOT



### ENHANCED WATT PILOT



### ULTRAFAST WATT PILOT



### LARGE APERTURE WATT PILOT



### MOTORIZED WATT PILOT



- Any **Watt Pilot** can be upgraded to motorized version

## WATT PILOT SELECTION GUIDE

| Model     | ØCA   | Range                                | Configuration   | Optimization                     | Attenuation range at CWL           | Typical application  | LIDT <sup>1</sup>  | Price: Manual      | Price: Motorized    |
|-----------|-------|--------------------------------------|---|----------------------------------|------------------------------------|--|--|--------------------|---------------------|
| Standard  | 15 mm | ±2 nm                                | λ/2 LO waveplate + cemented PBS cube                    | Transmission/<br>reflection mode | 0,5-95% for transmitted p-pol beam | CW medium power lasers and LDs                                   | >0,3 J/cm <sup>2</sup>   | 600 €              | 1350 €              |
|           |       | λ/2 ZO waveplate + cemented PBS cube |   |                                  |                                    | 640 €  |  | 1390 €             |                     |
|           | 10 mm | ±10 nm                               | λ/2 ZO waveplate + optically contacted PBS cube         |                                  |                                    | High power CW and pulsed lasers, LDs                             | >20 J/cm <sup>2</sup>  | 810 €              | 1560 €              |
| Enhanced  | 15 mm | ±5 nm                                | λ/2 ZO waveplate + 2x Brewster TFP                      | Reflection mode                  | 0,3-99% for reflected s-pol beam   | High power CW and pulsed lasers, LDs                             | >5J/cm <sup>2</sup> ; or >100mJ/cm <sup>2</sup> @ 100fs, 800nm | 720 € <sup>2</sup> | 1470 € <sup>3</sup> |
|           |       | ±20 nm                               | λ/2 ZO waveplate + 2x broadband Brewster TFP            |                                  | 0,5-98% for reflected s-pol beam   |  |  | 820 €              | 1570 €              |
|           |       | ±5 nm                                | λ/2 ZO waveplate + 1x Brewster TFP                      | Transmission mode                | 0,3-95% for transmitted p-pol beam |  |  | 700 € <sup>4</sup> | 1450 € <sup>5</sup> |
| Ultrafast | 15 mm | ±25 nm                               | λ/2 ZO waveplate + 2x broadband (ultrafast) TFP         | Transmission mode                | 1-85% for transmitted p-pol beam   | Ultrafast, broadband laser sources with pulse length 100 - 50 fs | >5J/cm <sup>2</sup> ; or >100mJ/cm <sup>2</sup> @ 100fs, 800nm | 1220 €             | 1970 €              |
|           |       |                                      |   | Transmission Contrast mode       | 0,2-70% for transmitted p-pol beam |  |  |                    |                     |
|           |       |                                      |   | Reflection mode                  | 4-96% for reflected s-pol beam     |  |  |                    |                     |
|           |       |                                      |   | Reflection Contrast mode         | 0,1-70% for reflected s-pol beam   |  |  |                    |                     |
|           |       | ± 50 nm                              | λ/2 achromatic waveplate + 2x Broadband (ultrafast) TFP | Transmission mode                | 1-85% for transmitted p-pol beam   | Ultrafast, broadband laser sources with pulse length <50 fs      |  | 1380 €             | 2130 €              |
|           |       |                                      |   | Transmission Contrast mode       | 0,2-70% for transmitted p-pol beam |  |  |                    |                     |
|           |       |                                      |   | Reflection mode                  | 4-96% for reflected s-pol beam     |  |  |                    |                     |
|           |       |                                      |   | Reflection Contrast mode         | 0,1-70% for reflected s-pol beam   |  |  |                    |                     |

<sup>1</sup> LIDT values measured at 1064 nm, 10 ns, 10 Hz unless otherwise specified

<sup>2</sup> For wavelength 266 nm price is 750 €

<sup>3</sup> For wavelength 266 nm price is 1500 €

<sup>4</sup> For wavelength 266 nm price is 730 €

<sup>5</sup> For wavelength 266 nm price is 1480 €