

HP100

Up to 125 x 125 mm, 100 W - 15 kW



New product



KEY FEATURES

- > **HIGH POWER HANDLING**
Handles up to 15 kW of continuous power with our standard models. Custom models available for higher powers (See SUPER HP)
- > **LARGE APERTURE**
Our standard HP models have very large effective apertures to accommodate large laser beams. Larger apertures with various shapes are available upon request (See SUPER HP)
- > **AVAILABLE WITH YAG AND CO₂ CALIBRATIONS**
All HP Models can be calibrated at YAG and CO₂ wavelengths with a calibration uncertainty of $\pm 5\%$
- > **DIRECT USB CONNECTION TO A PC**
Each head comes with both a DB15 connector (for use with a Gentec-EO display device) and a USB output for direct connection to a PC
- > **TRACK WATER PARAMETERS**
Water flow and temperature are monitored in real time and displayed continuously

OUTPUT OPTIONS

- > **SMART DB15 CONNECTOR**
Contains all the calibration data
- > **USB PORT**
 - Connects directly to a PC
 - Included in all HP models
- > **BLU WIRELESS METER** 
Connects via Bluetooth to a PC

COMPATIBLE DISPLAYS & PC INTERFACES



MIRO ALTITUDE



MAESTRO



TUNER



UNO

ACCESSORIES



Stand with steel post



Extension cables
(4, 15, 20 or 25 m)*



5 m USB cable
(Included)



Water filter
(Metric: 202984, Imperial: 202990)



Pelican carrying case

*A USB power adaptor will be necessary if the HP is used with a DB15 extension cable.

HP100

Specifications

CE NIST*
Traceable
*Also traceable to NRC-CNRC



	HP100A-4KW-HE	HP100A-4KW-HE-TUBE	HP100A-12KW-HD	HP100A-12KW-HD-TUBE	HP125A-15KW-HD	HP125A-15KW-HD-TUBE
MAX AVERAGE POWER	4000W	4000W	12000W	12000W	15000W	15000W
EFFECTIVE APERTURE	100mm ϕ	70mm ϕ	100mm ϕ	70mm ϕ	125x125 mm	70mm ϕ
COOLING METHOD	Water-cooled	Water-cooled	Water-cooled	Water-cooled	Water-cooled	Water-cooled

MEASUREMENT CAPABILITY						
Spectral range	0.19-20 μ m	0.19-20 μ m	0.19-20 μ m	0.19-20 μ m	0.19-20 μ m	0.19-20 μ m
Calibrated spectral range ^a	0.248 - 21 μ m	0.248 - 21 μ m	0.248 - 21 μ m	0.248 - 21 μ m	0.248 - 21 μ m	0.248-2.1 μ m
Noise equivalent power ^b	± 3 W	± 3 W	± 10 W	± 10 W	± 15 W	± 15 W
Minimum average power ^c	100W	100W	300W	300W	500W	500W
Rise time (nominal)	7s	7s	9s	9s	15s	15s
Back reflections	10-15%	<4%	10-15%	<4%	10-15%	2-4%
Calibration uncertainty ^d	± 5	± 5	± 5	± 5	± 5	± 5
Repeatability	± 2	± 2	± 2	± 2	± 2	± 2
Linearity with power	± 1.5	± 1.5	± 1.5	± 1.5	± 2	± 2
Linearity vs beam diameter	± 1	± 1	± 1	± 1	± 1	± 1
Linearity vs beam position ^e	± 1.7	± 1.7	± 1.7	± 1.7	± 1.0	± 1.0

DAMAGE THRESHOLDS						
Maximum average power density ^f						
500 W	10 kW/cm ²	10kW/cm ²	16kW/cm ²	16kW/cm ²	16kW/cm ²	16kW/cm ²
4kW	4kW/cm ²	4kW/cm ²	---	---	---	---
5kW	---	---	6.5kW/cm ²	6.5kW/cm ²	6.5kW/cm ²	6.5kW/cm ²
10kW	---	---	3.5kW/cm ²	3.5kW/cm ²	3.5kW/cm ²	3.5kW/cm ²
15kW	---	---	---	---	1.5kW/cm ²	1.5kW/cm ²

PHYSICAL CHARACTERISTICS						
Effective aperture	100mm ϕ	70mm ϕ	100mm ϕ	70mm ϕ	125x125 mm	70mm
Absorber (high damage threshold)	HE	HE	HD	HD	HD	HD
Cooling water						
Required cooling flow ^g	(4-6) LPM < ± 1 LPM/min	(4-6) LPM < ± 1 LPM/min	(6-10) LPM < ± 1 LPM/min	(6-10) LPM < ± 1 LPM/min	(8-10) LPM < ± 1 LPM/min	(8-10) LPM < ± 1 LPM/min
Temperature range	5 - 25 °C	5 - 25 °C	15-25 °C	15-25 °C	5 - 25 °C	15-25 °C
Rate of temperature change	< ± 3 °C/min	< ± 3 °C/min	< ± 3 °C/min	< ± 3 °C/min	< ± 3 °C/min	< ± 3 °C/min
Maximum water pressure (Output)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)
Dimensions	127H x 127W x 74D mm	127H x 127W x 234D mm	127H x 127W x 70D mm	127H x 127W x 230D mm	153H x 153W x 70D mm	153H x 153W x 21D mm
Weight (head only)	1.8kg	6.0kg	3.3kg	75 kg	5kg	10 kg

ORDERING INFORMATION						
Available output options	DB15 & USB or Bluetooth & USB	DB15& USB or Bluetooth & USB	DB15& USB or Bluetooth & USB	DB15& USB or Bluetooth & USB	DB15&USB or Bluetooth & USB	DB15& USB or Bluetooth & USB
Compatible stand	STAND-S-443-C	2x STAND-S-443-C	STAND-S-443-C	2x STAND-S-443-C	2x STAND-S-443-C	3x STAND-S-443-C
Product page						

- a. Calibrations at 21 to 25 μ m and 10.6 μ m are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. For lower powers, call your Gentec-EO representative.
d. At 1064 nm and 1070 nm
e. For a beam size of 20% of the aperture area, moved across 80% of the aperture area.
f. At 1064 nm, 1.07-1.08 μ m and 10.6 μ m.
g. >1 min. Contact Gentec-EO for deionized water cooling module option.

Specifications are subject to change without notice