Accessories for cw laser

Modification of *Coherent* Ti:Sa 899-21 and 699-21 lasers

including:

- Exchange of the mount for the Brewster plate
  Advantage: now it can easily be removed and put it in the beam path again reproducibly (important for the basic adjustment). Besides this, the Brewster angle can be optimized
- Installation of a new mounting for the thick and thin etalon (split etalon) The thin etalon can be removed and installed reproducibly (allows easier optimization of the output power) Vertical position of the thin etalon can be adjusted for power optimization
- adjustment of the tweeter mount by direct fine thread adjustment screws
- adjustment of the upper folding mirror mount by direct fine thread adjustment screws
- adjustment of the mount for the outside pump beam turning mirror by direct fine thread adjustment screws
- modification of the output coupling unit

Modification of *Coherent* dye laser 899-21 and 699-21 lasers

including:

- Exchange of the mount for the Brewster plate
  Advantage: now it can easily be removed and put it in the beam path again reproducibly (important for the basic adjustment). Besides this, the Brewster angle can be optimized
- Installation of a new mounting for the thick and thin etalon (split etalon) The thin etalon can be removed and installed reproducibly (allows easier optimization of the output power) Vertical position of the thin etalon can be adjusted for power optimization
- adjustment of the tweeter mount by direct fine thread adjustment screws
- adjustment of the upper folding mirror mount by direct fine thread adjustment screws
- modification of the output coupling unit
- dye circulator unit (optimized cw dye circulator and low pressure special nozzle)

Optics for cw ring laser

Optic-Set for Radiant Dyes dye ring laser and Coherent 699

- Optic-Set VIS (without Tweeter), P1, M1, M4, M5
- Tweeter with Mechanics and Piezo-element, M3

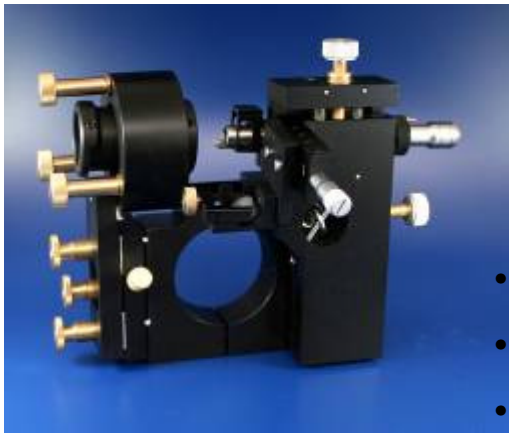
Optic-Set for Radiant Dyes dye ring laser and Coherent 699

- Optic-Set BLUE (without Tweeter), P1, M1, M4, M5
- Tweeter with Mechanics and Piezo-element, M3

Optic-Set for Radiant Dyes TiSa laser and Coherent 899

- Optic-Set TiSa (without Tweeter), P1, P2, P3, M1, M4, M5
- Tweeter with Mechanics and Piezo-element, M3

Accessories for Coherent cw Dye laser



RDU 10
Exchange Unit for the Coherent 699
Consisting of the nozzle holder and pump mirror adjustment. Exchangeable against the original unit; suitable for the original nozzle and the Radiant Dyes special nozzle

Advantages:

- Exact, reproducible and straight adjustment with micrometer screws.
- Fast dye change by exchanging the whole nozzle holder unit.
- Adjustment without any tools.

RDE 15
Separate Etalon Mounting for cw ring laser **"*Coherent 699"***.
Dual-axis translation for the thin etalon; allows simple adjustment of the lasers and guarantees optimum output power
.

RDJ 99 Alignment Aid
For the Coherent ring dye laser 699/21-29 for optimum adjustment of the optical axes of the different components.

Geared Pump
For older *Coherent* systems. For higher flow rates and pressures up to 75 PSI.

RDMA 100
Stronger magnet; up to 100 PSI pressure.

Modification and Overhaul of old Laser Systems and Laser Accessories:

- *Coherent* and *Spectra Physics* dye lasers
- *Coherent* Dye circulators
- *Coherent* Geared pump
- *Spectra Physics* pump
- Dye flow cell units
- Dye nozzles for *Coherent* lasers
- Laser optics sets
- Exchange of all optomechanical components
- Upgrade of cw free-running (not stabilized) systems with reference cavity and stabilizing electronics

Accessories for cw Dye laser

The following cw laser accessories should be used in order to achieve an absolutely steady and precise dye jet for **Radiant Dyes**, *Coherent*, *Spectra Physics and for custom-made laser systems*.
We carry two different types of dye circulators and air cushions which were designed in such a way that vibrations due to the geared pumps can be avoided completely. This is achieved by a high efficient especially spooled cooling coil and also by the air buffer inside the stainless steel filter housing.
As in all our other dye circulators we paid attention to the exclusive use of stainless steel and synthetic materials which are not harmful to the laser dyes and withstand high pressures. Our low pressure dye circulator is the most appropriate pump for all usual applications with standing wave and ring dye lasers. For all high stabilised applications we recommend the low pressure air cushion and the 0.2 mm special dye nozzle RDSN 02 (interferometrically tested).
For all special applications where high pressure and flow rates are required we recommend the high power dye circulators and dye nozzles with different thicknesses.

RD 1000 CW
High performance gear pump consisting of: 380 Volt motor with max. 2800 rpm, up to a maximum pressure of 7 bar, max. flow rate approx. 6 l/min., integrated aircushion in the filter housing, non-ferrous metal, only stainless steel and plastics that are resistant to all known solvents

RD 1000 CW - high pressure
High Pressure-Dye Circulator, same as RD 1000 CW, but up to approx. 13 bar

Filter for Spectra Physics and Coherent dye circulators retention rate 0,2 µm

RDF 11
Filter for RD 2000 CW

RDF 50
Filter for Spectra Physics and Coherent dye lasers

RDAC 10
Low Pressure Air Cushion

RDAC 20
High Pressure Air Cushion

RDSN 02
Low Pressure Special Nozzle.
Dye jet thickness 0.2 mm for original Coherent or Spectra Physics pumped dye systems. The nozzle can be used for pressures of approx. 12 bar, depending on high pump energies (20-25 W). So the nozzle covers almost all applications.
On request, we also deliver dye nozzles with the thickness 0,05; 0,1; 0,3; 0,4; 0,5 and 1 mm.

Power Measuring Heads

The listed power heads are based on thermoelectric principles, which means that the heat generated by the incident radiation is transformed directly into a voltage.

The head of BB–series has a black, broadband absorbing coating. The HP–series are equipped with a ceramic coating which allows high energy and power densities.

The head HP 25 S is specially made for service. The compact dimensions enable easier transport. Due to the smaller heat sink, high powers are only possible for a short time.

The heads need some seconds to reach a thermal equilibrium. To avoid this delay time, we recommend the use of one of our power meters, such as LEM 2420. These devices determine the voltage and its increase and evaluate the laser power from this data. The time constant from the whole system is reduced to 1 second.

	BB 25	**HP 25 S**	**HP 25/50**	**HP 50**	**HP 25/150**
Active diameter	25 mm	25 mm	25 mm	50 mm	25 mm
Max. power	10 W	10 W	50 W	30 W	150 W
Max. power density	20 W/cm²	20 W/cm²	40 W/cm²	20 W/cm²	200W/cm²
Dimensions [mm]	Ø 120 x 80	Ø 90 x 32	Ø 120 x 80	Ø 150 x 80	Ø 120 x 60
Sensitivity	70 mV/W .. 150 mV/W				
Connector	BNC				

More power heads for other applications on request. Please contact us!