

HiPIMS Coating System



CC800® HiPIMS combines all the advantages of the classical DC Sputter coating system with the capabilities of the latest HiPIMS technology. The system is equipped with a total of six Sputter cathodes, four of which can be operated in either HiPIMS or DC mode. The additional two DC cathodes can be operated, for example, to provide more complex multilayer coatings, to deliver color and top coatings, or simply to increase deposition rates. The absolutely free combination of these technologies within one process gives an unlimited range of coating designs at very low production costs. Deposition rates of 2 µm/h and process times of 4–5 hours

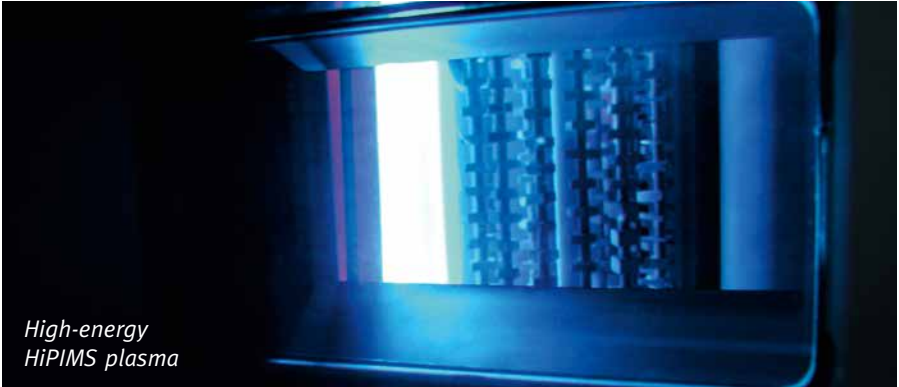
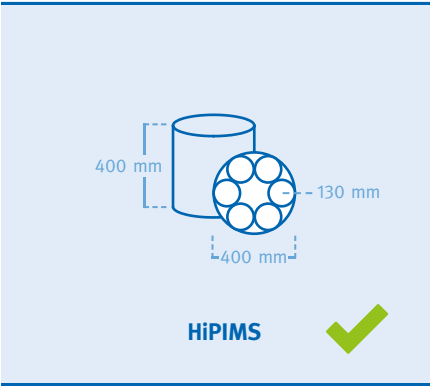
can be achieved in pure HiPIMS mode. When simultaneously operating of all 6 cathodes, 3 µm/h are reached. This was a so far unthinkable low production time for a coating capacity of 1.800 round shank tools or 5.000 indexable inserts before now. The CC800® HiPIMS is able to deposit all available CemeCon Sputter coatings and almost all PVD coatings available on the market. Furthermore, it is the perfect machine for the development of custom-built processes. The customer-friendly user interface „DataView“ and the integrated planning tool „DataPlan“ facilitate the design of individual coating

solutions. Your coating will make your product stand out on the market, allowing users to gain a competitive edge. Other features such as user-friendly remote control by tablet and phone, the maintenance-friendly assembly, fully automatic cathode shutters, automatic door closing and the unit for a quick exchange of the coating table complete the picture of CC800® HiPIMS being the optimum coating system for the production and development of state-of-the-art high performance coatings.

CC800® HiPIMS		
Coating area, Ø x h	[mm]	Ø400 x 400
Substrate table, Ø x Ø satellites x number of satellites	[mm], number	Ø400 x Ø130 x 6
Table for quick batch change		Optional
Sputter cathodes	items [mm]	6 x 500 (including 4 optional HiPIMS/DC and another 2 DC; all cathodes equipped with shutters)
Maximum substrate dimensions Ø x h	[mm]	Ø400 x 800
Drill capacity Ø6 mm x 60 mm	item	1,800
Insert capacity 12.7 mm x 3.5 mm	item	4,920
Maximum substrate weight	[kg]	250
Deposition rate	µm/h	In pure HiPIMS mode 2 µm/h. In DC or combi mode up to 3 µm/h.
Cycle time for FerroCon®*	[h]	4.5
Processes		HiPIMS and Sputtering using booster technology. All established CemeCon coatings are possible.
Substrate pre-treatment (plasma etching)		Booster, MF and HiPIMS etching
Electrically conductive coatings		Yes
Electrically non-conductive coatings		Yes
Electrically non-conductive substrates		Yes
Rated power	[kW]	80
Power consumption per batch for 3 µm FerroCon®*	[kWh]	120
Outer dimensions (b x l x h)	[mm³]	1,450 x 3,350 x 2,200
Weight (empty)	[kg]	~ 3,500
Closing of chamber doors		Automatic closing

* Pure HiPIMS coating on 10 mm milling cutter

COATING VOLUME

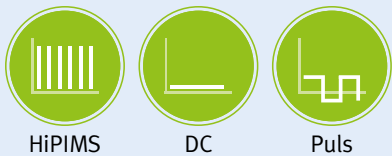


HiPIMS HIGH POWER IMPULSE MAGNETRON SPUTTERING

Cathode



BIAS



Intuitive touch control and pneumatic actuators for chamber doors facilitate daily operation of the unit.