

## Communications & Power Industries Power Couplers

### POWER COUPLERS FOR:

SUPERCONDUCTING ACCELERATORS  
FREE ELECTRON LASER INJECTORS  
SPALLATION NEUTRON SOURCES  
ENERGY RECOVERY LINACS  
X-RAY FREE ELECTRON LASERS  
THIRD HARMONIC CAVITIES

## Communications & Power Industries Power Coupler Products

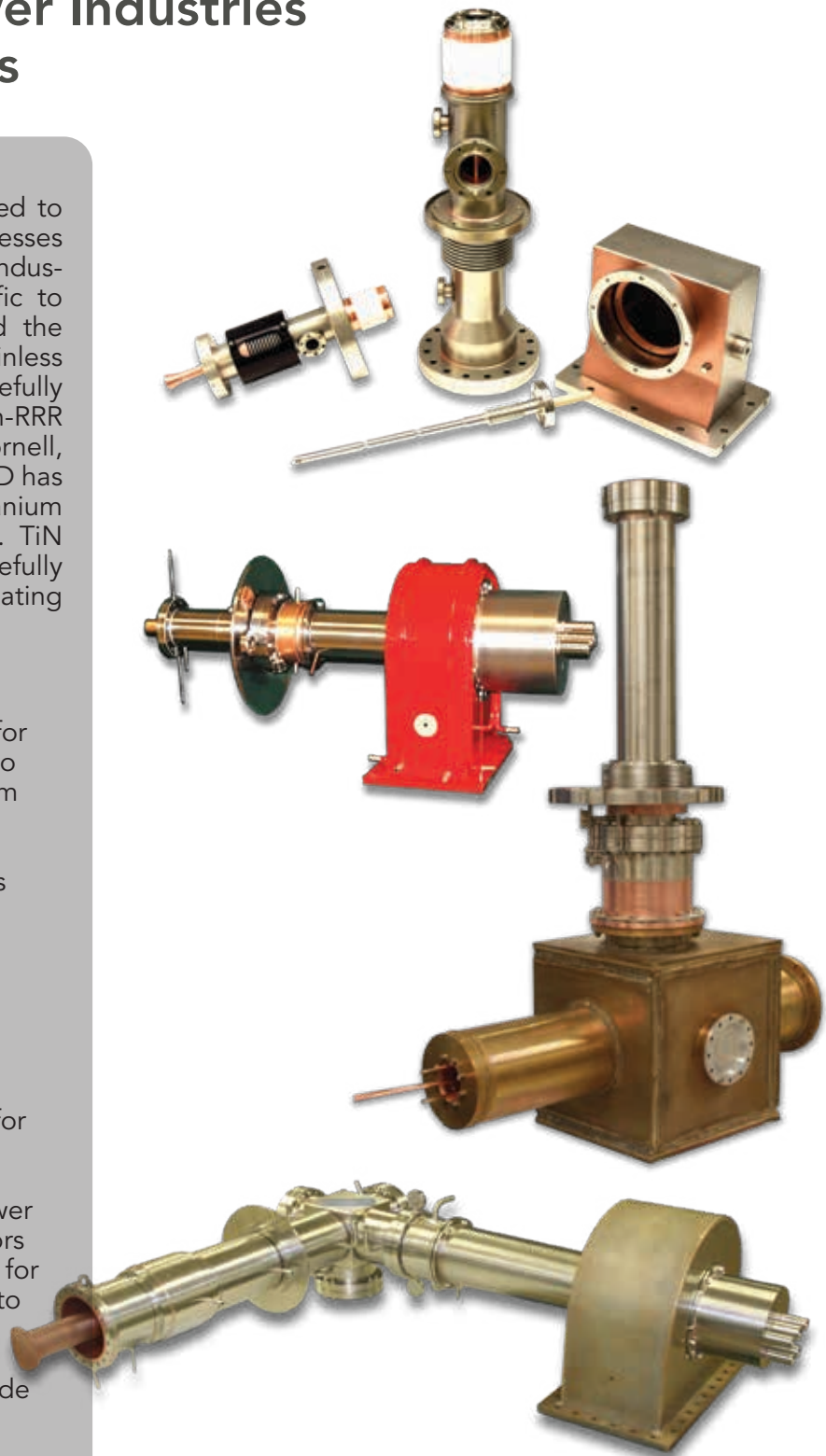
CPI BMD's power couplers are manufactured to its customer's specifications using processes which are standard to the electron device industry, as well as processes which are specific to power couplers. CPI BMD has developed the capability of plating high-RRR copper on stainless steel. Plating is done in-house under carefully controlled conditions. CPI BMD's high-RRR copper plating has been qualified by Cornell, DESY, SLAC, XFEL, and CEA Saclay. CPI BMD has developed the capability of applying titanium nitride (TiN) coatings to ceramic windows. TiN coating is done in-house under carefully controlled conditions. CPI BMD's TiN coating process has been qualified at DESY.

CPI BMD has:

- Installed a class 10 (ISO-4) clean room for power coupler cleaning and assembly to XFEL standards. The class 10 clean room and associated procedures have been vetted by accelerator scientists, power coupler experts, and vacuum specialists from XFEL, DESY, SLAC, and JLAB.
- Installed two bake out stations for the LCLS-II program.
- Extensive experience working with the world's best accelerator scientists and engineers to fabricate power couplers for superconducting accelerators.

CPI BMD is currently manufacturing 300 power couplers for the XFEL and LCLS-II accelerators and has built up the necessary infrastructure for fabrication and assembly at rates necessary to support these programs.

At CPI Beverly Microwave Division, we provide high quality microwave products supporting superconducting linear accelerators.



Check out all our power coupler products  
at [www.cpii.com/bmd](http://www.cpii.com/bmd)





# CPI Power Couplers

Communications & Power Industries Power Couplers customized for your application.

Contact us at  
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CPI Model Number	Accelerator Application	Freq. (MHz)	Peak Power (kW)	Avg. Power (kW)
VWP3097	IFMIF Prototype (CEA Saclay)	175	200	200
VWP3098	FRIB Prototype (MSU)	322	14	14
VWP3124	RFQ (ORNL)	402	14	14
VWP2107	NSLSII (AES, BNL)	500	500	500
VWP3070	FEL Injector (AES, BNL)	704	500	500
VWP1185/86	FEL Injector (AES, JLAB)	748	350	350
VWP1133	SNS Prototype (JLAB)	805	1000	60
VWP1162	RIA Prototype (MSU)	805	1000	10
VWP1137	Tesla Test Facility (CNRS Orsay, DESY)	1300	1100	7.2
VWP3049	ILC Test Area (Fermi, SLAC and Triumf)	1300	1100	7.2
VWP3126	XFEL (EuXFEL)	1300	1100	7.2
VWP3130	SLAC (LCLS-II)	1300	7	7
VWP3032	ERL Injector (Cornell and Triumf)	1300	75	75
VWP3069	ERL Injector (Daresbury)	1300	75	75
VWP3113	SRF (Peking University)	1300	50	50
VWP3108	ERL (Cornell)	1300	5	5
VWP3088	XFEL Third Harmonic Cavity (Fermi, Desy)	3900	45	12.5



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For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.

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