

Cryoelectra Solid-State RF Amplifiers

Sold, delivered and completed.

Model	Frequency	Power @ P1	Sold	Class AB Mode	Cooling	Customer	Year	Region	Application
CRE-313A	70 MHz	135 kW	17 pcs. pls & cw		H ₂ O	Varian Med. PT	2019-2025	Worldwide	Particle Therapy
CRE-314A	72 MHz	25 kW	1 pcs. pls & cw		H ₂ O	Accel GmbH	2009	Germany	Particle Therapy
CRE-312A	72 MHz	150 kW	1 pcs. pls & cw		H ₂ O	Accel GmbH	2010	Germany	Particle Therapy
CRE-312B	72 MHz	150 kW	3 pcs. pls & cw		H ₂ O	Varian Med. PT	2011-2014	Worldwide	Particle Therapy
CRE-312C	72 MHz	135 kW	15 pcs. pls & cw		H ₂ O	Varian Med. PT	2015-2020	Worldwide	Particle Therapy
CRE-368A	91 MHz	120 kW	1 pcs. pls & cw		H ₂ O	Hefei Ion Med. Inst.	2017	China	Particle Therapy
CRE-368B	78 MHz	120 kW	2 pcs. pls & cw		H ₂ O	Hefei Ion Med. Inst.	2021-2022	China	Particle Therapy
CRE-317A	117 MHz	32 kW	1 pcs. pls & cw		H ₂ O	SLRI	2010	Thailand	Synchrotron Light Source
CRE-317B	118 MHz	80 kW	1 pcs. pls & cw		H ₂ O	SLRI	2016	Thailand	Synchrotron Light Source
CRE-381A	120 MHz	175 kW	1 pcs. long pulse		H ₂ O	MIT	2021-2022	USA	Nuclear Fusion
CRE-366A	205 MHz	80 kW	1 pcs. pls & cw		H ₂ O	Varian Med. PT	2016	Germany	Particle Therapy
CRE-321A	500 MHz	2.50 kW	1 pcs. Pulse		Air	BNL	2013	USA	Synchrotron Light Source
CRE-321B	500 MHz	1.00 kW	2 pcs. Pulse		Air	Research Instrum.	2024	Canada	Synchrotron Light Source
CRE-346A	495 MHz	0.50 kW	6 pcs. pls & cw		H ₂ O	HZB Berlin	2014	Germany	Synchrotron Light Source
CRE-331D	496 MHz	75 kW	7 pcs. pls & cw		H ₂ O	HZB Berlin	2015-2022	Germany	Synchrotron Light Source
CRE-331E	497 MHz	40 kW	1 pcs. pls & cw		H ₂ O	HZB Berlin	2014	Germany	Synchrotron Light Source
CRE-331G	498 MHz	80 kW	1 pcs. pls & cw		H ₂ O	TU Dortmund	2017	Germany	Synchrotron Light Source
CRE-331H	499 MHz	20 kW	1 pcs. pls & cw		H ₂ O	TU Dortmund	2016	Germany	Synchrotron Light Source
CRE-331I	500 MHz	100 kW	1 pcs. pls & cw		H ₂ O	Canad. Light Source	2018	Canada	Synchrotron Light Source
CRE-331J	500 MHz	45 kW	1 pcs. pls & cw		H ₂ O	ANSTO	2021-2023	Australia	Synchrotron Light Source
CRE-331M-V2	500 MHz	120 kW	1 pcs. pls & cw		H ₂ O	Diamond Light Source	2020-2022	UK	Synchrotron Light Source
CRE-331M	500 MHz	130 kW	4 pcs. pls & cw		H ₂ O	ELETTRA	2019-2023	Italy	Synchrotron Light Source
CRE-331N	500 MHz	150 kW	4 pcs. pls & cw		H ₂ O	Paul Scherer Institut	2021-2024	Switzerland	Synchrotron Light Source
CRE-331S	500 MHz	120 kW	5 pcs. pls & cw		H ₂ O	Diamond Light Source	2023-2025	UK	Synchrotron Light Source
CRE-315A	1.00 GHz	1.00 kW	1 pcs. pls & cw		Air	DESY Hamburg	2009	Germany	Synchrotron Light Source
CRE-347A	1.30 GHz	0.24 kW	3 pcs. pls & cw		H ₂ O	HZB Berlin	2017	Germany	Synchrotron Light Source
CRE-310A	1.30 GHz	0.25 kW	1 pcs. pls & cw		Air	HZB Berlin	2010	Germany	Synchrotron Light Source
CRE-309B	1.30 GHz	0.50 kW	1 pcs. pls & cw		Air	DESY Hamburg	2011	Germany	Synchrotron Light Source
CRE-350A	1.30 GHz	4 kW	1 pcs. pls & cw		Air	DESY Hamburg	2017	Germany	Synchrotron Light Source
CRE-350F	1.30 GHz	15 kW	5 pcs. pls & cw		H ₂ O	HZB Berlin	2019	Germany	Synchrotron Light Source
CRE-350D	1.30 GHz	130 kW	1 pcs. pls & cw		H ₂ O	Research Instrum.	2020-2022	Germany	Radioisotope Production

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CRE-387A	1.40 GHz	3 kW	1 pcs. pls & cw		H ₂ O	BNL	2020	USA	Particle Accelerator for Basic Research
CRE-371A	1.50 GHz	15 kW	6 pcs. pls & cw		H ₂ O	HZB Berlin	2021-2025	Germany	Synchrotron Light Source
CRE-371B	1.50 GHz	7.50 kW	1 pcs. pls & cw		H ₂ O	HZB Berlin	2021	Germany	Synchrotron Light Source
CRE-371C	1.50 GHz	20 kW	1 pcs. pls & cw		H ₂ O	DESY Hamburg	2025	Germany	Synchrotron Light Source
CRE-372A	1.75 GHz	15 kW	3 pcs. pls & cw		H ₂ O	HZB Berlin	2018-2021	Germany	Synchrotron Light Source
CRE-372B	1.75 GHz	7.50 kW	1 pcs. pls & cw		H ₂ O	HZB Berlin	2018	Germany	Synchrotron Light Source
CRE-329A	3.00 GHz	1 kW	1 pcs. Pulse		Air	BNL	2012	USA	Synchrotron Light Source
CRE-329B	3.00 GHz	1 kW	2 pcs. Pulse		Air	Research Instrum.	2024	Canada	Synchrotron Light Source
CRE-316B	3.00 GHz	0.50 kW	3 pcs. Pulse		Air	TU Darmstadt	2012	Germany	Synchrotron Light Source
CRE-320A	3.00 GHz	0.80 kW	4 pcs. Pulse		Air	BNL	2012	USA	Synchrotron Light Source
CRE-319A	3.00 GHz	0.40 kW	6 pcs. Pulse		Air	BNL	2014	USA	Synchrotron Light Source
CRE-376A	3.00 GHz	0.35 kW	4 pcs. Pulse		Air	HZB Berlin	2018	Germany	Synchrotron Light Source

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Under construction

Model	Frequency	Power @ P1	Sold	Class AB Mode	Cooling	Customer	Year	Region	Application
CRE-3176A	176 MHz	154 kW	1 pcs. pls & cw		H ₂ O	SCKCEN MYRRHA	2024-2026	Belgium	Nuclear Fission
CRE-3176B	176 MHz	2x 6 kW / 15 kW / 23 kW / 2x 32 kW / 40 kW / 2x 48 kW	1 pcs. pls & cw		H ₂ O	SCKCEN MYRRHA	2025-2026	Belgium	Nuclear Fission
CRE-3176C	176 MHz	2x 56 kW / 23 kW	2 pcs. pls & cw		H ₂ O	SCKCEN MYRRHA	2025-2027	Belgium	Nuclear Fission
CRE-3176D	176 MHz	2x 56 kW	2 pcs. pls & cw		H ₂ O	SCKCEN MYRRHA	2025-2027	Belgium	Nuclear Fission
CRE-3352A	352 MHz	8x 20 kW	4 pcs. pls & cw		H ₂ O	SCKCEN MYRRHA	2025-2027	Belgium	Nuclear Fission
CRE-3352C	352 MHz	6x 13 kW / 2x 20 kW	1 pcs. pls & cw		H ₂ O	SCKCEN MYRRHA	2026-2028	Belgium	Nuclear Fission
CRE-3352D	352 MHz	8x 6.2 kW	2 pcs. pls & cw		H ₂ O	SCKCEN MYRRHA	2026-2028	Belgium	Nuclear Fission
CRE-331S	500 MHz	120 kW	2 pcs. pls & cw		H ₂ O	Diamond Light Source	2023-2026	UK	Synchrotron Light Source
CRE-331O	500 MHz	320 kW	1 pcs. pls & cw		H ₂ O	Canadian Light Source	2025-2027	Canada	Synchrotron Light Source
CRE-362B	591 MHz	400 kW	2 pcs. pls & cw		H ₂ O	BNL	2025-2027	USA	Particle Accelerator for Basic Research