



AC voltage equipment up to 1000 V ac

Year	Purchaser	Qty.	Description	Type of vehicle	Country
2009/10	ScotRail	40	Sibest [®] Auxiliary power supply 2x 90 kVA	EMU Desiro UK	United Kingdom
2007	German Railways (DB AG)	10	Aux. Converter for air conditioning 30 kVA	High speed train ICE 1 [®]	Germany
2007/08	Mittelrheinbahn	32	Sibest [®] Auxiliary Power Supply 100 kVA	EMU Desiro Main Line	Germany
2006	SARL Bangkok	10	Sibest [®] Auxiliary Power Supply 280 kVA	EMU	Thailand
2007/08	Bulgarian Railways BDZ	26	Sibest [®] Auxiliary Power Supply 2x 86 kVA	Desiro EMU	Bulgaria
2007/08	Austrian Railways (ÖBB)	64	„Drehrichter Kälte“ 40 kVA	Double-deck coaches	Austria
2005/06	German Railways (DB AG)	682	Aux. Converter for air conditioning 30 kVA	High speed train ICE 1 [®]	Germany
2005/07	Indian Rail	170	Aux. converter 110 kVA	EMU	India
2004/09	Ukraine Railways (UZ)	200	Auxiliary power supply 2x 80 kVA	Electric locomotives Class DS3	Ukraine
2004/05	Heathrow Airport Link (HAL)	5	Sibest [®] Auxiliary power supply 2x 90 kVA	EMU Desiro UK	United Kingdom
2004	Uzbekistan Railways	24	Sibest [®] Auxiliary power supply 2x 80 kVA	Electric locomotives	Uzbekistan
2004	Hyundai Rotem, Korea	1	Sibest [®] Auxiliary power supply 2x 80 kVA	Electric locomotives Class KNR 8200	Korea
2004	ZELW China	8	Head end power supply 275 kVA	Electric locomotives	Iran
2004/06	Swiss Railways (SBB/CFF/FFS)	120	Sibest [®] Aux. power supply 2x 95 kVA	Double deck EMU	Switzerland
2003/04	Austrian Railways (ÖBB)	21	Aux. power supply 40 kVA	Double deck carrier	Austria
2002/05	German Railways (DB AG)	82	Head end power supply 500 kW	High speed trains ICE 3 [®] and ICE T [®]	Germany
2002/03	Korean National Railways	10	Sibest [®] Auxiliary power supply 2x 80 kVA	Electric locomotives Class KNR 8200	Korea
2005/07	RENFE Spain	52	Sibest [®] Aux. power supply 500 kVA	High speed trains Velaro E	Spain
2001/02	Hungarian Railways (MÁV)	20	Auxiliary power supply 2x 80 kVA	Electric locomotive ES64U2-V4	Hungary
2001/02	GySEV Hungary	10	Auxiliary power supply 2x 80 kVA	Electric locomotive ES64U2-V5	Hungary
2001/03	Portuguese Railways (CP)	40	Sibest [®] Aux. power supply 210 kVA	EMU CP2000	Portugal
2001	Ukraine Railways (UZ)	2	Auxiliary power supply 2x 80 kVA	Electric locomotive Class DS3	Ukraine

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2001/02	Siemens AG	80	Auxiliary power supply 2x 80 kVA	Dispo locomotives	Germany
2000/02	Angel Trains	77	Auxiliary power supply 2x 80 kVA	EMU Desiro UK	United Kingdom
2000/02	First Great Eastern	21	Sibest [®] Auxiliary power supply 2x 80 kVA	EMU Desiro UK	United Kingdom
2000	Karsdorfer Eisenbahngesellschaft	1	Sibest [®] Aux. power supply 6x 40 kVA	Electric locomotive Class LE 5100	Germany
2000/02	ZELW China	40	Aux. power supply 3x 80 kVA	Electric locomotive Class DJ1	China
2000/02	Greek Railways (OSE)	41	Sibest [®] Aux. power supply 210 kVA	EMU	Greece
2000/01	Express Rail Link Malaysia	25	Sibest [®] Aux. power supply 160 kVA	EMU	Malaysia
1999/00	CP Portugal	87	Aux. power supply 65 kVA	EMU "Linha de Sintra"	Portugal
1999	CFR Rumänien	25	Sibest [®] Aux. power supply 6x40 kVA	Electric locomotive Class LE 5100	Romania
1998	CP Portugal	16	Aux. power supply 55 kVA und 65 kVA	EMU "Linha de Sintra"	Portugal
1998/01	Dänische Staatsbahn	26	Auxiliary power supply 2x 80 kVA	Electric locomotive Class EG 3100	Danmark
1998/06	Austrian Railways (ÖBB)	800	Auxiliary power supply 2x 80 kVA	Electric locomotive "Taurus"	Austria
1998	Korean National Railways	4	Auxiliary power supply 2x 80 kVA	Electric locomotives Class KNR 8100	Korea
1997	ZELW, China	12	Head end power supply 500 kVA	Electric locomotives	China
1996	German Railways (DB AG)	1	Head end power supply (HEP) 2x 250 kVA and Output Converter (2x 70 kVA + 1x 10 kVA)	Prototype high speed train ICE 3 [®]	Germany
1996/97	CP Portugal	40	Aux. power supply 20x 55 kVA, 20x 65 kVA	EMU "Linha de Sintra"	Portugal
1996/99	German Railways (DB AG)	108	Head end power supply (HEP) 2x 250 kVA	High speed trains ICE 3 [®]	Germany
1996/99	German Railways (DB AG)	86	Head end power supply (HEP) 2x 250 kVA	High speed trains ICE T [®]	Germany
1996/01	German Railways (DB AG)	398	Auxiliary power supply 2x 80 kVA	Electric locomotive Class E152	Germany

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AC voltage equipment ≥ 1000 V ac

Year	Purchaser	Qty.	Description	Type of vehicle	Country
1995	CFR Rumänien	2	Aux. power supply 240 kVA for Lokomotiven	Electric locomotive Class LE 5.100	Romania
1994/95	HOZAG	54	Static converter 25 kVA	Hotel train	Switzerland
1989/90	German Federal Railways	120	Power Packs 50 kVA incl. Battery charger and inverter	Passenger coaches Class Bvmz	Germany
2000/02	Greek Railways OSE	213	Sibest [®] Power Packs 54 kVA to 76 kVA	Passenger coaches	Greece
1995	NSB Norway	20	Aux. power supply 140 kVA and battery charger 10 kW for locomotives	Diesel locomotive Class Di8	Norway
1995	TÜVASAS	3	Aux. Power supply consisting of transformer, inverter and battery charger	Passenger coaches	Turkey
1995	German Railways (DB AG)	26	Power Packs incl. battery charger and inverter, ICE 1 [®]	Passenger coaches of ICE 2 [®]	Germany
1995	German Railways (DB AG)	44	Power Packs incl. battery charger and Inverter	Passenger coaches of ICE 2 [®] Type BDp	Germany
1995	German Railways (DB AG)	44	Power Packs incl. battery charger and inverter	Passenger coaches of ICE 2 [®] Type BWS	Germany
1995	German Railways (DB AG)	220	Power Packs incl. battery charger and inverter	Passenger coaches of ICE 2 [®] Type Ap//Bp	Germany
1995	Wagonbau Ammendorf	2	Power Packs incl. battery charger and inverter	Passenger coaches	Russia
1994/95	DUEWAG, Krefeld	21	Aux. Power supply consisting of transformer, battery charger and filter	S-Bahn coaches Class Bxf	Germany
1994/95	DUEWAG, Krefeld	49	Aux. Power supply consisting of transformer, inverter and battery charger	S-Bahn coaches Class Bx and Abx	Germany
1991/92	German Federal Railways	19	Power Packs 90 kVA incl. battery charger, inverter, electric cubicle and installation	Passenger coaches of ICE 1 [®] (dining car)	Germany
1991/92	German Federal Railways	71	Power Packs 50 kVA incl. Battery charger and inverter for air conditioning	Passenger coaches of ICE 1 [®] (Ap/Bp)	Germany
1991	Wagon Union, Berlin	2	Power Packs incl. Transformer, inverter, electric cubicle and installation	Refurbishment Quick-Pick coaches	Germany

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AC voltage equipment ≥ 1000 V ac

Year	Purchaser	Qty.	Description	Type of vehicle	Country
1989/90	Drägerwerk, Travemünde	14	Power Packs with transformer, inverter, electric cubicle and installation	Tunnel rescue train	Germany
1989/90	PFA, Weiden	45	Aux. Power supply consisting of transformer, battery charger and filter	InterRegio coaches	Germany
1989/92	German Federal Railways	41	Power Packs 90 kVA incl. Battery charger, inverter electric cubicle and installation	Passenger coaches of high speed train ICE 1® (dining car)	Germany
1989/92	German Federal Railways	226	Power Packs 50 kVA incl. battery charger and inverter	Passenger coaches of high speed train ICE 1®	Germany
1988/89	Talbot, Aachen	16	Power Packs incl. transformer, battery charger and inverter	InterRegio coaches	Germany
1987/88	German Federal Railways	24	Power Packs "Single voltage"	Passenger coaches Class Bvmz	Germany
1987	German Federal Railways	6	Power Packs "Single voltage" incl. battery charger and inverter	Passenger coaches Class Bvmz	Germany
1984/85	German Federal Railways	110	Static converter, air-compressor motor and battery charger	Class Bp coaches	Germany



Aux. Power supplies with three-phase input

Year	Purchaser	Qty.	Description	Type of vehicle	Country
2007/08	Russian Railways	16	Sibest [®] Battery charger 60 kW	Velaro RUS	Russia
2007/08	Chinese Railways	86	Sibest [®] Battery charger 60 kW	Velaro CN	China
2003	German Railways (DB AG)	3	Head end power supply 275 kVA	EMU VT 601	Germany
2001	Classic Train Tours	2	Head end power supply (HEP) 400 kVA	Diesel locomotive Class 200	Germany
1999/00	German Railways (DB AG)	24	Head end power supply (HEP) 400 kVA	Diesel locomotive Class 218	Germany
1998/03	Belgian Railways (SNCB)	172	Aux. power supply 115 kVA	Diesel locomotiven Class HLD77	Belgium
1993/94	German Federal Railways	20	Head end power supply 400 kVA	Diesel locomotiven Class 218	Germany
1991/92	Deutsche Reichsbahn	20	Aux. Power supply for refurbishment of diesel locomotives consisting of two alternator, HEP 720kVA and battery charger	Diesel locomotiven	Germany
1988/89	SGP, Vienna	20	Aux. Power supply consisting of transformer, battery charger, electrical cubicles and air conditioning equipment.	Passenger coaches	Iran



DC voltage equipment 600/750 V dc

Year	Purchaser	Qty.	Description	Type of vehicle	Country
2007	Sifang Research Institute	20	Sets of modules and controls	Passenger coaches	China
2005/06	Wiener Linien	150	Aux. power supply 2x 35 kVA + 2x 8 kW	ULF LVR	Austria
2003/04	South West Trains Class 444	45	Sibest [®] Aux. power supply 2x 80 kVA and 1x 80 kVA	EMU Desiro UK	United Kingdom
2003/04	South West Trains Class 450	110	Sibest [®] Aux. power supply 2x 80 kVA	EMU Desiro UK	United Kingdom
2002/03	BTS Bangkok	19	Aux. power inverter 230 kVA	Metro cars	Thailand
2002/03	Tucheng Metro	13	Sibest [®] Aux. power inverter 2x 135 kVA	Metro cars	Taiwan
2002/05	German Railways (DB AG)	56	Battery charger	High speed trains ICE 3 [®] and ICE T [®] 2	Germany
2002/05	German Railways (DB AG)	300	Output converter 120 kVA	High speed trains ICE 3 [®] and ICE T [®] 2	Germany
2005/07	RENFE Spain	52	Sibest [®] bidirectional battery charger 60/30 kW	High speed trains Velaro E	Spain
1998/00	Tren Urbano, Puerto Rico	74	Aux. power inverter 80 kVA, heat-pipe cooled	Metro cars	Puerto Rico
1997/99	Bangkok Transportation Systems	35	Aux. power inverter 230 kVA	Metro cars	Thailand
1996/99	German Railways (DB AG)	75	Battery charger 45 kW	High speed train ICE T [®]	Germany
1996/99	German Railways (DB AG)	279	Output converter (2x 70 kVA + 1x 10 kVA)	High speed train ICE T [®]	Germany
1992/93	MBTA, Boston	86	Aux. power inverter 67 kVA in GTO technology	Metro MBTA	Canada
1991	Rheinische Bahngesellschaft	2	Aux. power inverter 25 kVA	Light rail vehicles	Germany
1986	Rheinische Bahngesellschaft	2	Aux. power inverter 25 kVA	Light rail vehicles	Germany
1985	BBC, Mannheim	8	UAux. power supply 4,5 kVA	Light rail vehicles	Germany
1984/87	Can-Car Rail, Canada	50	Aux. power supply 50 kVA	LRV Santa Clara	USA
1984/87	Can-Car Rail, Canada	126	Aux. power supply 45 kVA	LRV Toronto	Canada
1985	Kiepe Elektrik, Düsseldorf	6	Aux. power supply 103 kW	Battery locomotives for LUL	United Kingdom
1984	Kiepe Elektrik, Düsseldorf	6	Aux. power supply 15 kVA	Battery locomotives for LUL	United Kingdom

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DC voltage equipment 600/750 V dc

Year	Purchaser	Qty.	Description	Type of vehicle	Country
1983	Essener Verkehrs AG	1	Aux. power inverter 25 kVA	Light rail vehicles	Germany

DC voltage equipment 1500 V dc

Year	Purchaser	Qty.	Description	Type of vehicle	Country
2008/09	Metro Shenzhen Line 1 Ext.	156	Sibest® Aux. power supply 93 kVA and 73 kVA	Metro cars	China
2006/08	Metro Shanghai Linie 1 Ext.	72	Sibest® Aux. power supply 73 kVA	Metro cars	China
2006/08	EMU Mumbai	473	Sibest® Aux. power supply 115 kVA	EMU	India
2005/06	Metro Guangzhou	42	Sibest® Aux. power supply 2x 160 kVA	Metro cars	China
2004/05	FEVE Spain	44	Sibest® Aux. power supply 65 kVA	FEVE – S3600	Spain
2003/05	Metro Shanghai	56	Sibest® Aux. power inverter 265 kVA	Metro cars	China
2000/01	FEVE Spain	6	Sibest® Aux. power supply 65 kVA	FEVE locomotives	Spain
1999/00	FEVE Spain	24	Sibest® Aux. power supply 55 kVA	Light rail vehicles	Spain
1995	Indian Rail	2	Aux. power supply 180 kVA for locomotives	Electric locomotive Class WCG-3	India



DC voltage equipment 3000 V dc

Year	Purchaser	Qty.	Description	Type of vehicle	Country
2010	German Railways (DB AG)	30	Sibest [®] Auxiliary Power Supply 210 kVA	High speed train Velaro D	Germany
2010	German Railways (DB AG)	30	Sibest [®] Auxiliary Power Supply 180 kVA	High speed train Velaro D	Germany
2007/08	Russian Railways	32	Sibest [®] Auxiliary Power Supply 2x 160 kVA	High speed train Velaro RUS	Russia
2007/08	Russian Railways	32	Sibest [®] Auxiliary Power Supply 1x 160 kVA	High speed train Velaro RUS	Russia
2007/08	Chinese Railways	86	Sibest [®] Auxiliary Power Supply 2x 160 kVA	High speed train Velaro CN	China
2007/08	Chinese Railways	86	Sibest [®] Auxiliary Power Supply 1x 160 kVA	High speed train Velaro CN	China
2005/06	RENFE Spain	80	Sibest [®] Aux. power supply 160 kVA	EMU CIVIA II	Spain
2005	Spezremont	40	Sibest [®] Aux. power supply 80 kVA	EMU	Russia
2004	Spezremont	32	Sibest [®] Aux. power supply 80 kVA	EMU	Russia
2003	Spezremont	40	Sibest [®] Aux. power supply 80 kVA	EMU	Russia
2002/04	Russian Railways	20	Sibest [®] Power Packs 46/71 kVA	Passenger coaches	Russia
2002/03	RENFE Spain	28	Sibest [®] Aux. power supply 160 kVA	EMU CIVIA I	Spain
2002	Spezremont	10	Sibest [®] Aux. power supply 80 kVA	EMU	Russia
1999/02	Slovenian Railways SZ	60	Sibest [®] Aux. power supply 70 kVA	EMU	Slovenia
1999/00	CPTM Sao Paulo	20	Sibest [®] Aux. power supply 145 kVA	EMU	Brazil



Multiple voltage power supply

Year	Purchaser	Qty.	Description	Type of vehicle	Country
2007/09	Austrian Railways (ÖBB)	402	Sibest ® four system Power Packs 82 kVA	railjet of ÖBB	Austria
2007/08	Dispolok GmbH	50	Sibest ® multiple system aux. power supply 4x 90 kVA	Electric locomotive ES64 F4	Germany
2006/07	Czech Railways	12	Sibest ® four system Power Packs 80 kVA	Sleeper cars	Czech Republic
2004/05	Czech Railways	26	Sibest ® five system Power Packs 51 kVA	Passenger coaches	Czech Republic
2005	Swiss Railways (SBB/CFF/FFS)	19	Sibest ® multiple system aux. power supply 4x 80 kVA	Electric locomotive Rh474	Switzerland
2004/05	West Coast Main Line	30	Sibest ® Power Packs 2x 80 kVA	EMU Desiro UK	United Kingdom
2003	Twersker Wagonbau	19	Sibest ® Power Packs 75 kVA	Passenger coaches	Russia
2003/06	Austrian Railways (ÖBB)	258	Sibest ® multiple system Power Packs with redundancy 55 kVA	Passenger coaches	Austria
2000/01	Roswagomasch	36	Sibest ®-Power Packs 42/65 kVA	Passenger coaches	Russia
2000/02	German Railways (DB AG)	100	Sibest ® multiple system power supply 4x 80 kVA	Electric locomotive E189	Germany
2000/01	German Railways (DB AG)	42	Sibest ® Four system-Power Packs 80 kVA	Sleeper coaches	Germany
2000	Slovenian Railways	7	Sibest ® Four system-Power Packs 51 kVA	Passenger coaches	Slovenia
2000	Croatian Railways	2	Sibest ® Four system-Power Packs 51 kVA	Passenger coaches	Croatia
1998/99	German Railways (DB AG)	40	Power Packs 150 kW	High speed DMU Class ICE TD®	Germany
1998	Elektrovyprjमितel / Roswagomasch Russia	3	Power Packs 70 kVA	Passenger coaches	Russia
1997	Elektrovyprjमितel / Roswagomasch Russia	1	Power Packs 70 kVA	Passenger coaches	Russia

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Multiple voltage power supply

Year	Purchaser	Qty.	Description	Type of vehicle	Country
1997	Czech Railways (CD)	35	Five system Power Packs, 51kVA and earthing and disconnecting units	Passenger coaches	Czech Republic
1996	Ukrainian Railways (UZ)	1	Power Pack 45 kVA	Passenger coaches	Ukraine
1994	Lithuanian Railways	4	Power Packs incl. battery charger und inverter	Passenger coaches	Lithuania
1994	Polish Railways	1	Four system Power Pack	Passenger coaches	Poland
1994/95	Hungarian Railways (MÁV)	70	Power Packs 43 pcs. 55 kVA, 10 pcs. 35 kVA and 27 pcs 16 kVA	Passenger coaches	Hungary
1993/94	German Federal Railways	34	Aux. power supply incl. Transformer, battery charger with filter and inverter	InterRegio coaches	Germany
1988/89	German Federal Railways	16	Power Packs incl. Battery charger, transformer and inverter	InterRegio coaches	Germany
1988	GOSA, Yougoslavia	10	Power Packs incl. Battery charger and inverter	Passenger coaches	Hungary
1988	German Federal Railways	1	Aux. power supply incl. Transformer, battery charger with filter and inverter	InterRegio prototype coaches	Germany
1988	Austrian Railways (ÖBB)	2	Power Packs incl. battery charger and inverter	Passenger coaches	Hungary
1984/85	German Federal Railways	50	Static inverter, compressor motors and battery charger	Bp coaches	Germany



Miscellaneous

Year	Purchaser	Qty.	Description	Type of vehicle	Country
2008/09	Russian Railways	70	Inverter	High speed train Velaro RUS	Russia
2007/08	Chinese Railways	344	Inverter	High speed train Velaro CN	China
2000	Liebherr	4	Motor controller with integrated system control unit 70 kVA	Prototype air conditioning system at DB AG	Germany
1995	German Railways (DB AG)	26	Installation of railway coaches	Passenger coaches of high speed train ICE 2®	Germany
1994/95	DUEWAG, Krefeld	49	Installation and commissioning of S-Bahn-coaches	S-Bahn coaches Class Bx and ABx	Germany
1989	ABB, Wien	14	Compressor motors	Passenger coaches	Austria
1989/90	Wagon Union, Berlin	16	Transformers, static inverter, electrical cabinets, planning and installation	Refurbishment Quick-Pick dining cars	Germany
1988	Austrian Railways (ÖBB)	12	Alternator 10 kW	DMU 5047	Austria
1986	Danish Railways	15	Battery charger	Litra P, Post coach	Danmark
1985/86	AMTRAK, USA	1	Battery charger and batteries	Passenger coaches "State of Art"	USA
1983/86	Budd Company, USA	384	Battery charger and batteries	Light rail vehicles for Chicago	USA
1984/85	Algerian Railways	370	Alternator 4,5 kVA	Passenger coaches	Algerie
1984	Algerian Railways	221	Alternator 4,5 kVA	Passenger coaches	Algerie
1984	Budd Company, USA	93	Battery charger and batteries	Light rail vehicles for New York	USA
1984/85	Budd Company, USA	300	Aux. power supply 42 kVA	Light rail vehicles	USA
1983	Rheinische Bahngesellschaft Düsseldorf	1	Aux. power inverter 25 kVA	Light rail vehicles	Germany
1983	German Federal Railways	40	Motor, transformer, battery charger with filter, motor choke and static inverter	Bpmz coaches	Germany
1983	South African Railways	100	Aux. power supply 100 kVA	Shunting locomotives Class 8E	South Africa

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