

REFERENCE LIST

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Ultrapure Water Production

Semiconductor and Electronic Industries



Client	Plant Type	Capacity
Sunicon Freiberg/Germany	Water treatment for the photovoltaic industry	5 m ³ /h
	Activated carbon filter, Softening, reverse osmosis, EDI	2 m ³ /h
Astex Berlin/Germany	Ultrapure water for the semiconductor industry Softening, ROCEDIS (reverse osmosis, EDI), tank, polishing mixed bed	1 x 0.6 m ³ /h
Mikron Selenograd/Russia	Extension of ultra pure water plant for semiconductor industry	
	Pre treatment + Make-up Heater, ultrafiltration, membrane degassing, ROCEDIS(reverse osmosis, EDI), UV-oxidation, ion exchanger with boron selective resin	15 m ³ /h
	Polishing UV-oxidation, cooler, mixed bed polisher, membrane degassing, ultrafiltration	25 m ³ /h
Epcos Munich/Germany	Ultrapure water for the semiconductor industry ECOSOFT (softening), ROCEDIS (reverse osmosis, EDI), tank, UV-oxidation, polishing mixed bed	1 x 12 m ³ /h
ABB Lenzburg/Switzerland	Extension of ultra pure water plant for semiconductor Polishing Mixed bed, cooler, UV-oxidation, ultrafiltration	85 m ³ /h
	Overhaul pre treatment + Make-up	2 x 6 m ³ /h
CNII Mehaniki Moscow/Russia	Water treatment for the semiconductor industry	
	Pre treatment Multi-media filter, activated carbon filter, reverse osmosis, EDI	1 m ³ /h
	Polishing UV, cooler, mixed bed, ultrafiltration	3 m ³ /h
ABB Lenzburg/Switzerland	Extension of ultra pure water plant for semiconductor	
	Pre treatment + Make-up ECOSOFT- Softening, reverse osmosis, UV-oxidation, membrane degasser, EDI	2 x 10 m ³ /h
Stangl Eichenau/Germany	Water treatment for the photovoltaic industry	
	Pre treatment + Make-up Softening, ROCEDIS, membrane degasier	1 m ³ /h
	Polishing und Reclaim UV-sanitising, mixed bed, end filter	5 m ³ /h
Deutsche Solar Freiberg/Germany	Water treatment for the photovoltaic industry	
	Raw water treatment Ultrafiltration, activated carbon filter, UV	110 m ³ /h
	Cooling water treatment Filter, UV	150 m ³ /h
	Demineralisation plant Softener, Reverse Osmosis, UV, EDI, Polishing	85 m ³ /h
	Waste water treatment Neutralisation	85 m ³ /h

Client	Plant Type	Capacity
Solibro GmbH Fab 2 Thalheim/Germany	UPW – production, recycling and wastewater treatment plant for photovoltaic industry	Not disclosed
ABB Lenzburg/Switzerland	Extension of ultra pure water plant for semiconductor Tank, pumps and extension of polishing system	18 m ³ /h
X/Fab Erfurt/Germany	Renewing of raw water pumps Exchange of pumps Including electrical installation	50 m ³ /h
Elmos Dortmund/Germany	Ultrapure water for semiconductor industry RO, membrane degasser, EDI, UV, mixed bed polisher, cartridge filter	10 m ³ /h
Imec Leuven/Belgium	Ultrapure water for semiconductor industry Extension of an ultrapure water plant EcoSOFT, RO, membrane degasser, EDI UV, mixed bed polisher, ultrafiltration	18 m ³ /h 12 m ³ /h
Osram Penang/Malaysia	Ultra pure water for semiconductor industry: EcoSoft (Softener), RO, EDI, mixed bed polisher, UPW tank, UV, cartridge filter	30 m ³ /h
PETec Sedgefield/UK	Ultrapure water for semiconductor industry ECOsoft (Softener), heat exchanger, ROCEDIS (RO, Membrane Degasser, EDI) SEMICIRCLE (UV, Heat Exchanger, Mixed Bed, Ultrafiltration)	0.5 m ³ /h 1.5 m ³ /h
Solibro Thalheim/Germany	Ultrapure water for solar industry	Not disclosed
Solon Berlin/Germany	Ultrapure water for solar industry Softening, activated carbon filter, heat exchanger ROCEDIS (RO, Membrane Degasser, EDI) SEMICIRCLE (UV, Mixed Bed, Ultrafiltration)	1.0 m ³ /h 1.5 m ³ /h m ³ /h
Vector / HP Dublin/Republic of Ireland	Modification of the ultra pure water system ECOSOFT (Softening) Membrane degasser	45 m ³ /h 40 m ³ /h
X-Fab Erfurt/Germany	Extension of ultra pure water system Dosing, Reverse osmosis	18 m ³ /h
Epcos München/Germany	Ultrapure water for semiconductor production Refurbishment of EDI System	12 m ³ /h

Client	Plant Type	Capacity
Infineon Villach/Austria	Ultrapure water for semiconductor production Tank, heat exchanger, decarbonisation, membrane degasser, reverse osmosis, Tank, UV oxidation, external regenerable mixed bed, Polishing: Tank, UV-oxidation, cooler, mixed bed polisher, ultrafiltration	80 m ³ /h
		80 m ³ /h
Plastic Logic Dresden/Germany	Ultrapure water for semiconductor production ECOSOFT (Softener), heat exchanger, ROCEDIS (RO, Membrane Degasser, EDI) SEMICIRCLE (UV, Heat Exchanger, Mixed Bed, Ultrafiltration)	15 m ³ /h
		30 m ³ /h
		30 m ³ /h
Nivarox Neuchâtel/Switzerland	Ultrapure water for micro-mechanic applications ROCEDIS (RO, Membrane Degasser, EDI) SEMICIRCLE (UV, Mixed Bed, Filtration)	6 m ³ /h
		10 m ³ /h
Mikron Selenograd/Russia	Ultrapure water for semiconductor production Heater, Ultrafiltration, NOVALIS (RO), Membrane Degasser, ROCEDIS (RO, UV Oxidation, EDI) SEMICIRCLE (UV Oxidation, Cooler, Mixed Bed, Membrane Degasser, Ultrafiltration)	15 m ³ /h
		30 m ³ /h
		30 m ³ /h
Epcos München/Germany	Ultrapure water for semiconductor production ECOSOFT (Softener), ROCEDIS (RO, Membrane Degasser, EDI) SEMICIRCLE (UV Oxidation, Mixed Bed, Filtration)	13 m ³ /h
		20 m ³ /h
Bosch Reutlingen/Germany	Extension of Ultrapure water semiconductor production Membrane Degasser	2 x 37 m ³ /h
Photovoltech Tienen/Belgium	Ultrapure water for solar cell production ECOSOFT (Softening), ROCEDIS (Reverse Osmosis, EDI) UV-disinfection, mixed bed polisher, final filters	15 m ³ /h
		10 m ³ /h
		16 m ³ /h
		16 m ³ /h
Bosch Reutlingen/Germany	Extension of Ultrapure water semiconductor production MB, Regeneration station, UV, Final Filters	150 m ³ /h
ST Microelectronics Tours/France	Extension of Ultrapure water for semiconductor production Polishing mixed bed exchanger	70 m ³ /h
AMS Graz/Austria	Extension of Ultrapure water for semiconductor production Multimedia filter, activated carbon filter, demineralisation with ion exchangers, reverse osmosis, UV oxidation, membrane degasser, mixed bed ion exchange	15 m ³ /h

Client	Plant Type	Capacity
ST Microelectronics Singapore	Ultrapure water for semiconductor production Make up: Membrane degasser, UV, EDI, Mixed Bed, UPW Tank, Polishing: UV oxidation, Cooler, Mixed Bed, MDG, UF, Loop	50 m ³ /h 40 m ³ /h 100 m ³ /h
Fraunhofer Institut IPMS Dresden/Germany	Ultrapure water for semiconductor production ECOSOFT (Softening), ROCEDIS (Reserve Osmosis, MDG, EDI) UV-oxidation, mixed bed polisher, ultrafiltration Humidifier supply	25 m ³ /h 2 x 5 m ³ /h 15 m ³ /h 1 m ³ /h
AMIS Oudenaarde/Belgium	Extension of an ultrapure water plant ECOSOFT (Softening) EDI	40 m ³ /h 2 x 15 m ³ /h
Atmel Newcastle/UK	Ultrapure water for semiconductor production Ultrafiltration	2 x 7 m ³ /h
Infineon Porto/Portugal	Extension of an ultrapure water plant Multimedia Filter, ECOSOFT (Softening), ROCEDIS (Reserve Osmosis, EDI) UV-oxidation, mixed bed polisher, ultrafiltration	10 m ³ /h 7 m ³ /h 10 m ³ /h
SEZ AG Villach/Austria	Ultrapure water for semiconductor production ECOSOFT (Softening), ROCEDIS (Reserve Osmosis, MDG, EDI) UV-oxidation, mixed bed polisher, ultrafiltration Humidifier supply	1.2 m ³ /h 4 m ³ /h 1 m ³ /h
AMIS Oudenaarde/Belgium	Ultrapure water for semiconductor production Replacement of a vacuum degasser by membrane degasser	35 m ³ /h
APZ Illmenau Illmenau/Germany	Ultrapure water for semiconductor production Extension of UPW plant ECOSOFT (Softening), ROCEDIS (Reserve Osmosis, MDG, EDI) New Polishing System UV-oxidation, mixed bed polisher, ultrafiltration	6 m ³ /h 40 m ³ /h
Fraunhofer Institut Freiburg Freiburg/Germany	Ultrapure water for semiconductor production ECOSOFT (Softening), ROCEDIS (Reserve Osmosis, MDG, EDI), mixed bed polisher, UV-oxidation, mixed bed polisher, ultrafiltration	5 m ³ /h

Client	Plant Type	Capacity
Epcos Munich/Germany	Ultrapure water for semiconductor production ECOSOFT (Softening), ROCEDIS (reverse osmosis, EDI), UV-oxidation, mixed bed polisher, cartridge filter	10 m ³ /h
Infineon Regensburg/Germany	Ultrapure water for semiconductor production Retrofitting and extension: Softening, reverse osmosis, EDI, UV-oxidation, mixed bed, polisher, cartridge filter Neutralisation	20 m ³ /h 35 m ³ /h
Communicant Frankfurt/Germany	Ultrapure water for semiconductor production Raw water-Ultrafiltration for surface water, ACF, double pass reverse osmosis, membrane degasser, UV-oxidation, regenerable mixed bed, UPW tank, UV-oxidation, mixed bed polisher, membrane degasser, ultrafiltration	80 m ³ /h
ON Semiconductor Piestany/Slovakia	Ultrapure water for semiconductor production Make up system with : Activated carbon filter, Decarbonisation, atmospheric degasser, double pass reverse osmosis, UV-oxidation, working mixed bed	50 m ³ /h
SEZ AG Villach/Austria	Ultrapure water for semiconductor production ECOSOFT (Softening), ROCEDIS (Reserve Osmosis, MDG, EDI) UV-oxidation, mixed bed polisher, ultrafiltration	1.2 m ³ /h 4 m ³ /h
Seagate Northern Ireland	Ultrapure water for semiconductor production Extension of EDI-System	52 m ³ /h
Vector / HP Dublin/Republic of Ireland	Ultrapure water for semiconductor production Extension of HOT-DI- System	10 m ³ /h
Motorola Tianjin / China	Supervision of commissioning of Ultrapure Water Plant	
Osram Burgweinting/Germany	Ultrapure water for semiconductor production Softener ECOSOFT, reverse osmosis, EDI, mixed bed polisher, UPW tank, UV-sterilisation, mixed bed polisher, cartridge filter	30 m ³ /h
Infineon Technologies Regensburg/Germany	Ultrapure water for semiconductor production Tank, UV sterilisation, polisher mixed bed exchanger, ultrafiltration	60 m ³ /h
Infineon Technologies Austria AG Villach/Austria	Ultrapure water for semiconductor production Cation exchanger, membrane degasser, reverse osmosis, CONTIPUR (CEDI), mixed bed polisher UPW tank, UV sterilisation, mixed bed polisher, ultrafiltration	80 m ³ /h
Astex Berlin/Germany	Ultrapure water for semiconductor production Softening, reverse osmosis, CONTIPUR (CEDI)	1.2 m ³ /h

Client	Plant Type	Capacity
FUBA Printed Circuits GmbH Gittelde/Germany	Process water for the electronics industry Upflow solid bed plant, tank, mixed bed exchanger	10 m ³ /h 2 m ³ /h
Chartered Semiconductor Manufacturing Singapore	Ultrapure water for semiconductor production Polishing ultrafiltration	50 m ³ /h
Hewlett Packard Dublin/Republic of Ireland	Ultrapure water for the production of printer cartridges: Multimedia filter, softening, CONTIPUR (CEDI)	27 m ³ /h
DuPont Photomask Inc. Corbeil Essonnes/France	Ultrapure water for a sub-supplier of semiconductor production Polishing system: UV, mixed bed polisher, ultrafiltration	6 m ³ /h
X-Fab Erfurt/Germany	Ultrapure water production for semiconductor production Dosing stations, 4 reverse osmosis plants NOVALIS, CONTIPUR (CEDI), mixed bed polisher, UPW tank, UPW pumps	30 m ³ /h
Epcos Singapore	Ultrapure water for semiconductor production Extension of an existing treatment plant, CONTIPUR (CEDI), mixed bed polisher	3.5 m ³ /h
Wacker Siltronic Burghausen/Germany	Ultrapure water for semiconductor production Extension of an existing treatment plant, reverse osmosis, UV oxidation, mixed bed polisher, ultrafiltration	15 m ³ /h
	Loop	30 m ³ /h
AMS Graz/Austria	Ultrapure water for semiconductor production Multimedia filter, activated carbon filter, demineralisation with ion exchangers, reverse osmosis, UV oxidation, membrane degasser, mixed bed exchanger	28 m ³ /h
through Siegle + Epple	UPW tank, heat exchanger, UV oxidation, mixed bed polisher, ultrafiltration Loop	75 m ³ /h
Bosch Reutlingen/Germany	Ultrapure water for semiconductor production Extension of an existing demineralisation system	35 m ³ /h
Facility Service GmbH Heilbronn/Germany	Ultrapure water for semiconductor production Mixed bed polisher, UV, filter	5 m ³ /h
Infineon Burgweinting/Germany	Ultrapure water production for and treatment of wastewater resulting from semiconductor production (back end): Softening reverse osmosis, CONTIPUR (CEDI) Loop: mixed bed polisher Continuous neutralisation, lift stations	12 m ³ /h 12 m ³ /h
CS2 Kortenberg/Belgium	Ultrapure water for semiconductor production Softening, activated carbon filter, reverse osmosis, membrane degasser, CONTIPUR (CEDI) Loop	13.2 m ³ /h 10 m ³ /h
Infineon Dresden/Germany	Ultrapure water for semiconductor production Raw water ultrafiltration, activated carbon filter, softener, double-pass reverse osmosis, UV oxidation, membrane degasser, externally regenerated mixed bed exchanger UPW tank, heat exchanger, UV oxidation, mixed bed polisher, ultrafiltration	80 m ³ /h

Client	Plant Type	Capacity
TECH Singapore	Ultrapure water production and TMAH dosing Dosing plant, DI tank, filter	1.25 m ³ /h
Mitsubishi Alsdorf/Germany	Ultrapure water for semiconductor production Demineralisation with ion exchanger, mixed bed exchanger, vacuum degasser, reverse osmosis plant	118 m ³ /h
	Loop	63 m ³ /h
Varioplan La Neuveville/Switzerland	Pure water for electronics and semiconductor production DI water plant, neutralisation	0.5 m ³ /h
Philips Nijmegen/Netherlands	Ultrapure water for semiconductor production Polishing system: reverse osmosis, membrane degasser, mixed bed polisher, ultrafiltration	60 m ³ /h
	Loop	(60 m ³ /h)
1 st Silicon Kuching/Malaysia	Ultrapure water for the 8" wafer production Multimedia filter, activated carbon filter, decarbonisation, double-pass reverse osmosis plant, vacuum degasser, externally regenerated mixed bed exchanger	160 m ³ /h
	Polishing system: UV oxidation, membrane degasser, polisher mixed bed exchanger, ultrafiltration	
	Loop	2 x 120 m ³ /h
MIMOS Semiconductor Kuala Lumpur/Malaysia	Ultrapure water for semiconductor production Extension of an already existing UPW system by a membrane degasser stage	23 m ³ /h
TEMIC-FSG Heilbronn/Germany	Ultrapure water for semiconductor production TOC UV system, anion polisher, mixed bed polisher	5 m ³ /h
Infineon Technologies Regensburg/Germany	Ultrapure water for semiconductor production Extension 1: decarbonisation, vacuum degasser	25 m ³ /h
	Extension 2: decarbonisation, reverse osmosis, membrane degasser, UV, mixed bed exchanger	50 m ³ /h
	Extension 3: UV, polisher, ultrafiltration, reject ultrafiltration	80 m ³ /h
	Quality improvement: ultrafiltration, reject ultrafiltration	43 m ³ /h
Infineon Technologies Dresden/Germany	Ultrapure water for semiconductor production Extension of pre-treatment/make-up	90 m ³ /h
	Extension of UPW tanks	2 x 120 m ³ /h
IBM Corbeil/France	Ultrapure water for semiconductor production Reverse osmosis	5 x 30 m ³ /h
Merck Schuchardt Hohenbrunn/Germany	Pure water for the electronics industry: Softening, reverse osmosis NOVALIS, membrane degasser	0.5 m ³ /h
IMEC Leuven/Belgium	Ultrapure water for semiconductor production Softening, reverse osmosis, UV oxidation, CONTIPUR (CEDI), mixed bed polisher Polishing system: UPW tank, UV oxidation, membrane degasser, heat exchanger, mixed bed polisher, ultrafiltration	20 m ³ /h
Mitsubishi Alsdorf/Germany	Ultrapure water for semiconductor production Supply of CMP process with ultrapure water via UPW loop, the UPW water being produced by an already existing H+E system	11 m ³ /h

Client	Plant Type	Capacity
Tech Singapore	Ultrapure water for semiconductor production UPW tank, pump, UV, TMAH dosing	18 m ³ /h
Clariant GmbH Wiesbaden/Germany	Ultrapure water for the production of fine chemicals Reverse osmosis, membrane degasser, UV, mixed bed exchanger, fine filter	5 m ³ /h
Clariant GmbH Wiesbaden/Germany	Ultrapure water for the production of fine chemicals Polishing line consisting of UV, mixed bed exchanger, fine filter	15 m ³ /h
Videoton Szekesfeh/Hungary	Ultrapure water for semiconductor production Prefiltration, reverse osmosis, CONTIPUR (CEDI), membrane degasser, tank, mixed bed polisher, tank	9.5 m ³ /h
Unibauamt Freiburg/Germany	Ultrapure water for the semiconductor research Pre-filtration, softening, heat exchanger, membrane degasser, reverse osmosis, CONTIPUR (CEDI) Tank, mixed bed polisher, loop Neutralisation Filtration, UV, filtration	5 m ³ /h
LGM Böblingen/Germany	Ultrapure water for semiconductor production Replacement of existing reverse osmosis system by a two-stage permeate-staged reverse osmosis system for desalination, TOC reduction and removal of boron, equipped with low pressure modules	4 x 25 m ³ /h
Bosch Reutlingen/Germany	Ultrapure water for semiconductor production Pre-filtration, ultrafiltration, tank	150 m ³ /h
CS2 Zaventem/Belgium	Ultrapure water for the semiconductor finishing Activated carbon filter, softener, reverse osmosis, membrane degasser, CONTIPUR (CEDI) Tank, sterile filter, heat exchanger, Loop	4.5 m ³ /h 6 m ³ /h
Sunways Konstanz/Germany	Ultrapure water production and wastewater treatment for the production of solar cells Pre-filtration, reverse osmosis, CONTIPUR (CEDI), ultrapure water tank Continuous neutralisation Reclaim	max. 16.4 m ³ /h max. 16.4 m ³ /h 11 m ³ /h
EUPEC Pretzfeld/Germany	Ultrapure water for the thyristor production Softening, reverse osmosis, CONTIPUR (CEDI) UV, mixed bed polisher, fine filtration	10 m ³ /h
Heidenhain Traunreut/Germany	Ultrapure water for the production of tools: CONTIPUR (CEDI)	9 m ³ /h
Ericsson Kista/Sweden	Ultrapure water for semiconductor production UV, mixed bed exchanger, ultrafiltration	20 m ³ /h

Client	Plant Type	Capacity
Mietec Oudenaarde/Belgium	Ultrapure water for semiconductor production <u>Extension of reclaim system</u>	
	Tank, dosing unit, three-stage reverse osmosis	8 m ³ /h
	Tank, filter, reverse osmosis, UPW tank	4.5 m ³ /h
	Tank, mixed bed polisher	8 m ³ /h
Polygram Langenhagen/Germany	Ultrapure water for the CD production: Cation exchanger, anion exchanger, UV, mixed bed exchanger, fine filter	8 m ³ /h
University Lausanne/Switzerland	Ultrapure water for cleanroom technique Tank, CONTIPUR (CEDI)	4 m ³ /h
	Tank, UV, mixed bed polisher, fine filtration	
IBM Deutschland GmbH Böblingen/Germany	Treatment of HF-containing rinsing water Activated carbon filter, ion exchanger, bio-filter, ozone/UV treatment	10 m ³ /h
Shin Etsu Handotai Livingston/UK	Expansion of an existing Ultrapure water for the semiconductor production Turbidity removal filter, activated carbon filter, degasser, reverse osmosis, mixed bed polisher, UV sterilisation, 2 nd reverse osmosis, final polisher and ultra filtration	
	UPW (phase 1 + 2) DW (phase 1 +2)	62 m ³ /h 45 m ³ /h
ABB Lenzburg/Switzerland	Ultrapure water for the BMOS production: Softener, reverse osmosis plant, CONTIPUR (CEDI)	20 m ³ /h
	Mixed bed polisher, ultrafiltration	
	Wastewater treatment plant, chemical dosing systems	
Wacker Chemie Burghausen/Germany	Ultrapure water for the 12" wafer production: Reverse osmosis plant, UV oxidation, mixed bed polisher, ultrafiltration	15 m ³ /h
	Loop	40 m ³ /h
Siemens/Matsushita Singapore	Production of ultrapure water Multimedia filter, softener, reverse osmosis plant, mixed bed exchanger, UV oxidation, mixed bed exchanger cartridges	3 m ³ /h
Chartered Semiconductor Manufacturing Pte. Ltd Singapore 40K Extension	Ultrapure water for the 16/64 MB production Reverse osmosis plant, vacuum degasser, catalytic oxygen removal, externally regenerated mixed bed exchanger, polisher reverse osmosis plant, UV oxidation, various mixed bed polishers, ultrafiltration	74 m ³ /h
	Loop	112 m ³ /h
Chartered Semiconductor Manufacturing Pte. Ltd Singapore 30% Extension	Ultrapure water for the 16/64 MB production Reverse osmosis plant, vacuum degasser, catalytic oxygen removal, externally regenerated mixed bed exchanger, polisher reverse osmosis plant	48 m ³ /h
Siemens Microelectronic North Tyneside Tyne and Wear UK through McAlpine-Hochtief JV Tyne and Wear	Ultrapure water for the 8" wafer production Reverse osmosis plant I, vacuum degasser, UV oxidation, externally regenerated mixed bed exchanger, reverse osmosis plant II, UV oxidation, mixed bed polisher, ultrafiltration, hot DI, DI reclaim	120 m ³ /h
	Loop capacity - modules 1 and 2	145 m ³ /h

Client	Plant Type	Capacity
Mitsubishi Semiconductor Europe Alsdorf/Germany	Extension of an existing plant for the production of ultrapure water for semiconductor production Vacuum degasser, polisher plant with UV oxidation, polisher anion exchanger, UV oxidation, mixed bed polisher, ultrafiltration	55 m ³ /h
	Extendable to a capacity of	115 m ³ /h
	This extension also comprises a DI reclaim plant.	
SIMEC GmbH Dresden/Germany	Ultrapure water for the 16/64 MB production - Modules 1 and 2 Each with reverse osmosis plant, vacuum degasser, catalytic oxygen removal externally regenerated mixed bed exchangers, polisher reverse osmosis plant, UV oxidation, various ion exchange polishers, ultrafiltration, hot DI	2 x 120 m ³ /h
	DI-reclaim, loop and equipment connections	2 x 140 m ³ /h
	Loop - modules 1 and 2	220 m ³ /h
	Wastewater treatment - modules 1 and 2 DI reclaim (> 70 %) - module 1	80 m ³ /h
Chartered Semiconductor Manufacturing Pte. Ltd Singapore	Ultrapure water for the 16/64 MB production Reverse osmosis plant, vacuum degasser, catalytic oxygen removal, externally regenerated mixed bed exchanger, polisher reverse osmosis plant, UV oxidation, various mixed bed polishers, ultrafiltration	74 m ³ /h
	Loop	112 m ³ /h
Shin Etsu Handotai Livingston/UK	Ultrapure water for the semiconductor production Turbidity removal filter, activated carbon filter, degasser, reverse osmosis, mixed bed polisher, UV sterilisation, 2 nd reverse osmosis, final polisher and ultra-filtration	
	UPW (phase 1)	42 m ³ /h
	DW (phase 1)	33 m ³ /h
Ericsson AB Kista/Sweden	Ultrapure water for the 64 MB production Reverse osmosis plant, vacuum degasser, externally regenerated mixed bed exchanger, polisher reverse osmosis plant, UV oxidation, various mixed bed polishers, ultrafiltration	15 m ³ /h
Wacker Chemie Burghausen/Germany	Ultrapure water for the wafer production Ultrafiltration, externally regenerated mixed bed exchanger with IR-PVDF piping, UV sterilisation, fine filter	40 m ³ /h
Wacker Chemie GmbH Burghausen/Germany	Ultrapure water production systems of various sizes Most of them being reverse osmosis plants in combination with ultrafiltration	30 m ³ /h
Alcatel Mietec Oudenaarde/Belgium	Ultrapure water for the wafer production Reverse osmosis plant, vacuum degasser, externally regenerated mixed bed exchanger, polisher reverse osmosis plant, UV sterilisation, mixed bed polisher, ultrafiltration, loop and equipment connections	22 m ³ /h
ANT Backnang/Germany	Ultrapure water for a research laboratory Softener, permeate-staged reverse osmosis plant, mixed bed polisher	2 m ³ /h
	Loop (free from grooves)	5 m ³ /h
Telefunken Heilbronn/Germany	Water for the semiconductor production Reverse osmosis plant (fed with 18 MOhm ultrapure water from an already existing plant), three mixed bed polishers	8.3 m ³ /h

Client	Plant Type	Capacity
IBM Deutschland GmbH Böblingen-Hulb/Germany	Ultrapure water production plant Reverse osmosis plant, mixed bed exchanger, polishing stages, non-regenerable mixed bed polisher, connection of the individual units via tube channel having a length of about 500 m, with downstream polishing stage	150 m ³ /h
IBM Deutschland GmbH Sindelfingen/Germany	Ultrapure water production plants of various sizes Mostly ion exchange Wastewater treatment, wastewater desalination Recovery of copper and EDTA resulting from CC4 processes, DI reclaim, polishing stages, selective ion exchanger	up to 200 m ³ /h
University of Erlangen-Nürnberg Technologiegebäude Mikroelektronik Erlangen/Germany	Ultrapure water for a semiconductor research laboratory H decarbonisation, reverse osmosis plant, vacuum degasser, regenerable mixed bed exchanger, pure water station, mixed bed polisher, UV sterilisation, sterile filter and ultrafiltration Wastewater treatment plant for the disposal of water and regenerates resulting from lab baths	10 m ³ /h
IBM Deutschland GmbH Sindelfingen/Germany	Production of high-quality rinsing water Ultrafiltration plant for the removal of particles and bacteria from DI water	39 m ³ /h
Mitsubishi Semiconductor Europe Alsdorf/Germany	Ultrapure water for the semiconductor production Fluidised bed ion exchanger, reverse osmosis plant, vacuum degasser, externally regenerated mixed bed exchangers, ozonisation and UV sterilisation	55 m ³ /h

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