Reference plants
membrane filtration
(01/09/2011)

Membrane Filtration plants

Planning, construction and commissioning (including automation)

- Combined 3-stage, fully automatic **nanofiltration** – **polisher** plant for concentration of **sweet whey** with 810 m² spiral wound membrane (Russia - 2011)

- Combined 5-stage, fully automatic **reverse osmosis** – **polisher** plant for concentration of **sweet whey** with 3.550 m² spiral wound membrane (Germany - 2011)

- 1-stage, fully-automatic **microfiltration** plant with ceramic membrane for production of 15.000 l/h **ESL-milk** (Germany - 2011)

- 1-stage, fully-automatic **microfiltration** plant with 100 m² of spiral wound membrane for the regeneration of **brine** (Germany - 2011)

- 3-stage, fully automatic **reverse osmosis** plant with 2.400 m² spiral wound membrane for concentration of **sweet whey** to 24 % TS (Germany - 2011)

- 1-stage, fully automatic **reverse osmosis** plant with 1.100 m² spiral wound membrane for polishing of RO-permeate and evaporator condensate (Lithuania - 2011)

- 3-stage, fully automatic **ultrafiltration** plant with 130 m² spiral wound membrane for production of **fresh cheese** from **goat- and seep milk** (Austria - 2011)

- 2-stage, fully automatic **reverse osmosis** plant with 1.050 m² spiral wound membrane for concentration of **sweet whey** and **UF-permeate** (Holland - 2011)

- 2-stage, fully automatic **ultrafiltration** plant with 860 m² spiral wound membrane for production of **WPC 60** from **sweet whey** (Holland - 2011)

- 2-stage, fully automatic **ultrafiltration** plant with 530 m² spiral wound membrane for production of **WPC 60** from **sweet whey** (USA - 2011)

- 1-stage, fully-automatic **microfiltration** plant with 100 m² of spiral wound membrane for the regeneration of **brine** (Austria - 2010)

- 4-stage, fully automatic **ultrafiltration** plant with 600 m² spiral wound membrane for concentration of **fruit** and **vegetable juices** (Holland - 2010)

- combined 3-stage, fully automatic **ultrafiltration** plant with 1.400 m² spiral wound membrane for protein concentration from **skim milk** and 2-stage **reverse osmosis**, plant with integrated RO-polisher for concentration of the **UF-permeate** with 1.900 m² spiral wound membrane (Germany - 2010)
- 2-stage, fully automatic **ultrafiltration** plant with 700 m² spiral wound membrane for production of WPC 60 from **sweet whey** (Greece - 2010)

- 2-stage, fully-automatic **microfiltration** plant with 10 m² ceramic membrane for **casein standardization** (Germany - 2010)

- combined 2-stage, fully automatic **ultrafiltration** plant with 700 m² spiral wound membrane for concentration of **sweet whey** and 2-stage **nanofiltration** plant for concentration of the UF-permeate with 460 m² spiral wound membrane (Latvia - 2010)

- 2-stage, fully automatic **reverse osmosis** plant with 690 m² spiral wound membrane for concentration of **sweet whey** (Czech Republic - 2010)

- 1-stage, fully-automatic **microfiltration** plant with 13 m² ceramic membrane for **bacterial removal** from UF-concentrate out of sweet whey (WPC 60) (Byelorussia - 2009)

- Combined 3-stage, fully automatic **reverse osmosis – polisher** plant for concentration of **sweet whey** with 2.700 m² spiral wound membrane (Germany - 2009)

- 2-stage, fully automatic **ultrafiltration** plant with 390 m² spiral wound membrane for production of WPC 60 from **sweet whey** and for **protein standardization** from skim milk (Germany - 2009)

- 2-stage, fully automatic **nanofiltration** plant with 1.000 m² spiral wound membrane for concentration of **sweet whey** (Turkey - 2009)

- 2-stage, fully automatic **ultrafiltration** plant with 550 m² spiral wound membrane for production of WPC 35 from **whey concentrate** (Italy - 2009)

- 3-stage, fully automatic **ultrafiltration** plant with 1.200 m² spiral wound membrane for production of WPC 60 from **acid whey** (Germany - 2009)

- 5-stage, fully automatic **ultrafiltration** plant with 1.000 m² spiral wound membrane for concentration of **fruit** and **vegetable juices** (Germany - 2009)

- 10-stage, fully automatic **ultrafiltration** plant with 2.000 m² spiral wound membrane for concentration of **fruit** and **vegetable juices** (Germany - 2009)

- 1-stage, fully automatic **ultrafiltration** plant with 150 m² spiral wound membrane for concentration of **whole milk** (France - 2009)

- 4-stage, fully automatic **ultrafiltration** plant with 350 m² spiral wound membrane for concentration of **blood plasma** (Germany - 2008)

- 1-stage, fully automatic **ultrafiltration** plant with 240 m² spiral wound membrane for concentration of **whole milk** with **reverse osmosis** plant for concentration of UF-permeate (Germany - 2008)

- 3-stage, fully automatic **ultrafiltration** plant with 1.100 m² spiral wound membrane for production of WPC 60 and for concentration of **milk** (Turkey - 2008)

- 1-stage, fully automatic **ultrafiltration** plant with 500 m² spiral wound membrane for concentration of **skim milk** (Germany - 2008)

- 2-stage, fully automatic **nanofiltration** plant with 1.100 m² spiral wound membrane for concentration of **sweet whey** (Russia - 2008)

- 1-stage, fully-automatic **microfiltration** plant with 100 m² of spiral wound membrane for the regeneration of **brine** (Germany - 2008)
ALPMA-Reference list for membrane filtration plants

- 1-stage, fully automatic ultrafiltration plant for whole and skim milk with 400 m² spiral wound membrane (France - 2008)
- 4-stage, fully automatic ultrafiltration plant with 350 m² spiral wound membrane for concentration of blood plasma (Germany - 2007)
- 6-stage, fully automatic ultrafiltration plant with 1.000 m² spiral wound membrane for production of WPC 60 to 80 (Slovakia - 2007)
- 1-stage, fully-automatic microfiltration plant with ceramic membrane for production of 10.000 l/h ESL-milk (South Korea - 2007)
- 2-stage, fully automatic ultrafiltration plant with 1.000 m² spiral wound membrane for production of WPC 60 with combined 2-stage, fully automatic reverse osmosis – polisher plant with 1.100 m² spiral wound membrane for sweet whey (Switzerland - 2007)
- combined 2-stage, fully automatic reverse osmosis – polisher plant with 1.200 m² spiral wound membrane for sweet whey (Germany - 2007)
- combined 2-stage, fully automatic reverse osmosis – polisher plant with 1.600 m² spiral wound membrane for sweet whey (Germany - 2007)
- 2-stage, fully automatic reverse osmosis plant with 560 m² spiral wound membrane for concentration of sweet whey (Greece - 2007)
- combined 7-stage, fully automatic reverse osmosis – polisher plant with 5.500 m² spiral wound membrane for sweet whey (Germany - 2007)
- 3-stage, fully automatic ultrafiltration plant for raw milk and skim milk with 1.300 m² spiral wound membrane (Germany - 2006)
- combined 2-stage, fully automatic reverse osmosis – polisher plant with 700 m² spiral wound membrane for sweet whey (Germany - 2006)
- 1-stage, fully-automatic microfiltration plant with ceramic membrane for production of 10.000 l/h ESL-milk (Poland - 2006)
- 1-stage, fully-automatic pilot plant microfiltration / ultrafiltration with ceramic membrane and spiral wound membrane (Germany - 2006)
- 1-stage, fully-automatic pilot plant nanofiltration / reverse osmosis with spiral wound membrane (Germany - 2006)
- 2-stage, semiautomatic ultrafiltration plant with 400 m² spiral wound membrane for production of WPC 60 (Italy - 2006)
- combined 5-stage, fully automatic reverse osmosis – polisher plant with 5.500 m² spiral wound membrane for sweet whey (Germany - 2006)
- 2-stage, fully-automatic microfiltration plant with ceramic membrane for production of 15.000 l/h ESL-milk (Germany - 2006)
- 3-stage, fully automatic ultrafiltration plant with up to 2.000 m² spiral wound membrane for filtration of gelatine (Germany - 2006)
- combined 2-stage, fully automatic reverse osmosis – polisher plant with 700 m² spiral wound membrane for sweet whey (Germany - 2006)
- 2-stage, fully automatic ultrafiltration plant with 525 m² spiral wound membrane for concentration of cottage-cheese-whey (Slovakia - 2006)

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- 2-stage, fully automatic *ultrafiltration* plant with 700 m² spiral wound membrane and *ion exchanger* for the production of *demineralised whey protein concentrate* (Byelorussia - 2006)

- 2-stage, fully-automatic *microfiltration* plant with 30 m² ceramic membrane for *casein standardization* (Germany - 2006)

- 4-stage *nanofiltration* plant with 6.000m² membrane area for the concentration of *sweet whey* and *UF-permeate* (France, 2005)

- 3-stage *reverse osmosis* plant with 3.900 m² membrane area for the concentration of *NF-permeate* (France, 2005)

- 5-stage, fully automatic *ultrafiltration* plant with 2.000 m² spiral wound membrane for production of WPC 35 to 80 (Poland - 2005)

- 3-stage fully automatic *reverse osmosis* plant with 1.500 m² spiral wound membrane for concentration of *sweet whey* (Italy - 2005)

- 2-stage, fully automatic *ultrafiltration* plant with 150 m² spiral wound membrane for concentration of *egg white* (Poland - 2005)

- 3-stage *ultrafiltration* plant for the *chemical industry* (Germany – 2005)

- 2-stage, fully automatic *reverse osmosis* plant with 520 m² spiral wound membrane for concentration of *MF-permeate* (Austria - 2005)

- 2-stage, fully-automatic *microfiltration* plant with 130 m² ceramic membrane for *casein standardization* (Austria - 2005)

- 3-stage, fully automatic *ultrafiltration* plant with 730 m² spiral wound membrane for concentration of acid whey (Austria - 2005)

- combined 2-stage, fully automatic *nanofiltration/reverse osmosis* plant with 760 m² spiral wound membrane for the concentration of *sweet whey* and *permeate* (Austria - 2004)

- combined 2-stage, fully automatic *nanofiltration/reverse osmosis* plant with each 520 m² spiral wound membrane for the concentration of *sweet whey* and *permeate* (Austria - 2004)

- 4-stage, fully automatic *ultra-/diafiltration* plant with 1.100 m² spiral wound membrane for concentration of *whey concentrate* (Germany - 2003)

- 2-stage, fully automatic *ultrafiltration* plant with 400 m² spiral wound membrane for concentration of *skimmed milk* and *mozzarella whey* (Italy - 2003)

- 2-stage, fully automatic *nanofiltration* plant with 255 m² organic tubular membranes (Germany – 2003)

- 1-stage, fully-automatic *microfiltration* plant with ceramic membrane for production of 10.000 l/h ESL-milk (Poland - 2003)

- 4-stage, fully automatic *ultra-/diafiltration* plant with 590 m² spiral wound membrane for *skim milk* concentration (Germany - 2002)

- combined 4-stage, fully automatic *ultra-/diafiltration* plant with 1.100 m² spiral wound membrane for *gelatine* and 1-stage, fully automatic *reverse osmosis* plant for the *UF-permeate* (Germany - 2002)
- 4-stage, fully automatic *ultrafiltration* plant with 500 m² spiral wound membrane for concentration of animal *blood plasma* (Germany - 2002)
- 2-stage, fully automatic *reverse osmosis / nanofiltration* plant with 650 m² spiral wound membrane for concentration of *UF-Permeate* (Germany - 2002)
- 3-stage, fully automatic *ultrafiltration* plant with 625 m² spiral wound membrane for concentration of *sweet whey* (Germany - 2002)
- 2-stage, fully automatic *reverse osmosis* plant with *polisher* with 1.100 m² spiral wound membrane for concentration of *sweet whey* (Germany - 2002)
- 2-stage, fully automatic *reverse osmosis* plant with 780 m² spiral wound membrane for concentration of *sweet whey* (Austria - 2002)
- 1-stage, semi-automatic *pilot plant microfiltration / ultrafiltration* with 4,6 m² ceramic membrane (2002)
- 1-stage, semi-automatic *pilot plant ultrafiltration / nanofiltration* with max. 100 m² spiral wound membrane (Germany - 2001)
- 1-stage, fully automatic *ultrafiltration* plant with 250 m² spiral wound membrane for concentration of *skimmed milk* (Germany – 2000)
- 2-stage, fully automatic *ultrafiltration* plant with 700 m² spiral wound membrane for production of particulated *whey protein concentrate* (Austria – 2000)
- 3-stage, fully automatic *nanofiltration* plant with 1.600 m² spiral wound membrane for processing of *acidic whey* (Germany – 2000)
- 2-stage, semi-automatic *ultrafiltration* plant with 87 m² of organic tube - membrane for animal *blood plasma* concentration (Germany - 2000)
- 1-stage, fully-automatic *ultrafiltration* plant with 25 m² of hollow fiber membrane for the cleaning of *brine* (Germany - 1999)
- 2-stage, semi-automatic *ultrafiltration* plant with 56 m² of organic tube - membrane for *curd cheese* production (Poland - 1998)
- 2-stage, semi-automatic *ultrafiltration* plant with 72 m² of organic membrane for the concentration of *white egg* (Poland - 1997)
- 1-stage, semi-automatic *ultrafiltration* plant with 7 m² of inorganic membrane for the regeneration of CIP-solutions and for cleaning of *brine* (Germany - 1997)
- 1-stage semi-automatic *ultrafiltration* plant for cleaning of *oily waste water* with inorganic membranes (Germany - 1997)
- 1-stage, semi-automatic *ultrafiltration* plant with 72 m² of organic membrane for the concentration of *egg products* (Holland - 1997)
- 7-stage, fully automatic *microfiltration* plant for cleaning of *waste water* with 470 m² of inorganic membrane (Germany - 1996)
- 4-stage, fully automatic *ultrafiltration* plant with 182 m² of inorganic membrane for separation of *biological material* after fermentation (Slovakia - 1995)
- 2-stage, fully automatic reverse osmosis plant with 180 m² spiral wound membrane for concentration of sweet whey (Czech - 1995)

- 2 ultra- / microfiltration - pilot plants with inorganic membranes (Usbekistan - 1995)

- 3-stage, semi-automatic ultrafiltration plant with 92 m² of organic plate - membrane for cheese production (Austria - 1994)

- 2-stage, semi-automatic ultrafiltration plant with 30 m² of inorganic membrane for cheese production (Russia - 1994)

- Multifunctional pilot plant with 10 m² of organic and inorganic membrane for pilot tests (Germany - 1993)

- 1-stage, semi-automatic ultrafiltration plant with 4 m² of inorganic membrane for pilot tests (Germany - 1993)

- 1-stage, semi-automatic ultrafiltration plant with 10 m² of inorganic membrane for clarification of condensate (Austria - 1993)

- 2-stage, semi-automatic ultrafiltration plant with 80 m² of inorganic membrane for production of juices (Spain - 1992)

- 4-stage, semi-automatic microfiltration plant with 80 m² of inorganic membrane for separation of biological material after fermentation (Austria - 1992)

- 6-stage, fully automatic ultra- / diafiltration plant with 475 m² of organic plate - membrane for whey concentration (Germany - 1991)

- 1-stage, semi-automatic ultrafiltration plant with 6,8 m² of inorganic membrane for pilot tests (Spain - 1991)

- semi-automatic ultrafiltration plant with 34 m² of organic plate - membrane for milk and whey concentration (Germany - 1990)

- 2-stage, semi-automatic ultrafiltration plant with 68 m² of inorganic membrane for production of apple juice (Germany - 1987)