

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)

- 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)

- 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)