PLEIADE® polymeric membranes FILTRATION SYSTEMS

Data sheet

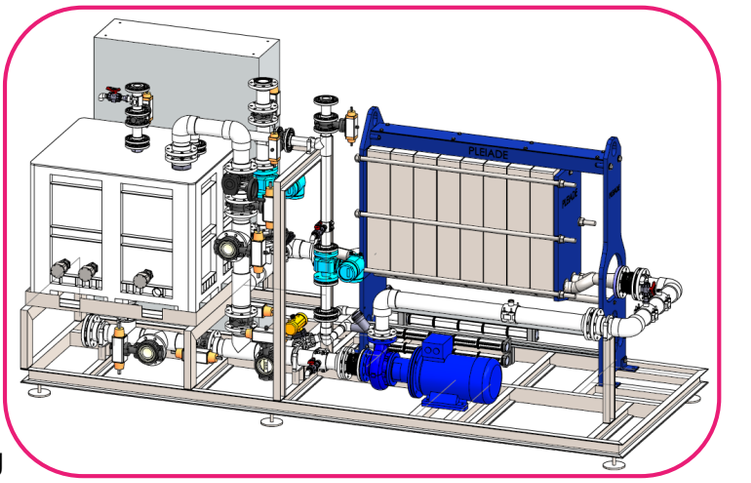
Long-time proven membrane systems

PLEIADE® systems offer robust and reliable performances for a wide range of applications with a permeate flow rate up to 6 m^3/h and a recovery of 99%.

PLEIADE® systems are designed with 3 ranges of flow-rate capacities: small (1-2 m^3/h), medium (3-4 m^3/h) and large (5-6 m^3/h).

PLEIADE® modules include PAN or PVDF flat-sheet membranes installed on plates (0.35 m^2/plate).

PLEIADE® modules operate in cross-flow mode with open channels (open flow path without spacer). The flow path width between sheets is available with either 1.65 mm or 3 mm spacing



The membrane pore size ranges from 30 nm (~150 kD) to 200 nm. Alternative pore sizes are possible upon request.

ALSYS experience in the field of polymeric system technology

Industries	Applications	Benefits
• Automotive • Surface treatment • Agriculture & Food	• E-coat paint bath recycling • Demineralized rinsing water recycling • Clarification • Valorization of by-products	• Liquid product recovery and reuse
• Automotive • Surface treatment • Leachate • Feed & Food • Chemicals	• Bioreactor post-treatment (MBR) • COD reduction • Waste volume reduction • Pre-filtration for reverse osmosis	• Industrial and municipal waste water reuse or discharge

What makes PLEIADE® SYSTEMS unique?

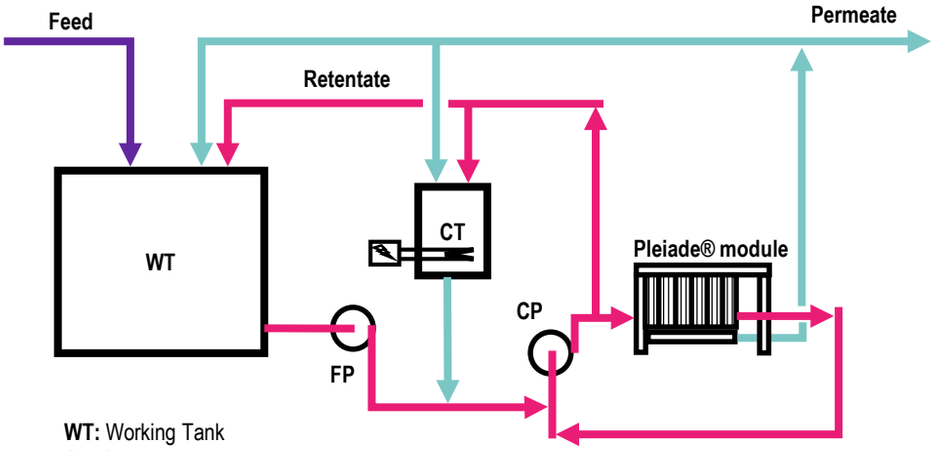
- → Turnkey system, manual or fully automatic with HMI touchscreen
- → Modularized design with 3 flow-rate capacities
- → Easy maintenance: all membranes are accessible from ground level and can be individually isolated for troubleshooting during operation
- → Compact footprint
- → **Proven reliability with 30 years of operational experience and more than 200 of references**
- → Unaffected by high solids load due to its large open channels – making it perfect for batch or continuous operation
- → Robust and durable construction including membranes secured to polypropylene plates, nitrile seals, and stainless steel frame
- → Pilot system is also available for trials

PLEIADE® polymeric membranes filtration systems

- Lower flow speed (max. 2.5 m/s) is enabled by the unique shape of the plates surface in combination with the membrane materials
- High and stable permeation flow over the cycles of periodic cleaning
- High and stable permeation flow even if solid particles face overconcentration event.

WATER & MEMBRANES

How the PLEIADE® SYSTEM works?



WT: Working Tank
CT: Cleaning Tank
FP: Feed Pump
CP: Circulating Pump

PLEIADE® module

System performance & capacities

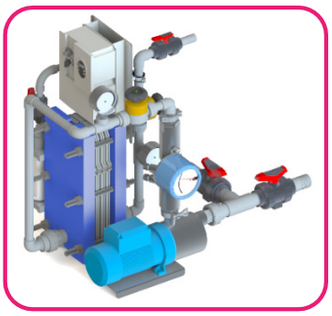
Model	# 2030	# 2060	# 2085
Number of plates:			
• 3 mm gasket thickness	60 plates	130 plates	200 plates
• 1.65 mm gasket thickness	78 plates	168 plates	250 plates
Membrane surface:			
• 3 mm gasket thickness	21 m²	46 m²	70 m²
• 1.65 mm gasket thickness	27 m²	59 m²	88 m²
Maximum flow rate (2 bar, 70 l/m²/h):			
• 3 mm gasket thickness	1 m^3/h	3 m^3/h	5 m^3/h
• 1.65 mm gasket thickness	2 m^3/h	4 m^3/h	6 m^3/h
Membrane pore size:	from 30 nm (~150 kD) to 200 nm		
System recovery:	up to 99 % (depending on solids content and application)		

Mechanical & electrical information

Tank volumes & materials	
CIP Tank volume	1 m^3
Material	PEHD
Heating power	18 kW
Utilities	
Power Requirements	75 amps 400V/3Ph/50Hz
Control	24V
Instrument Air	>3 bar, oil free
Feed Connection	ISO DN100 flange
Permeate Connection	ISO DN50 flange
Concentrate Connection	ISO DN80 flange
Waste Connection	ISO DN100 flange
Utility Water Connection (4 bar, 60°C)	ISO DN50 flange
Dimensions & Weight	
Skid Height	2.2 m
Skid Width	1.6 m
Skid Length	4 or 5 m
Shipping Weight	3600 kg

Pleiade® pilot and laboratory systems

- Designed for feasibility and scale-up studies: 0.88 m² membrane surface area
- Easy to transport: Weight: 70 kg, Length: 1.1 m, Width: 0.6 m, Height: 0.9 m
- Fast commissioning and start-up



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