

Pleiade® polymeric membrane filtration system

Technical data sheet

Long-time proven membrane system

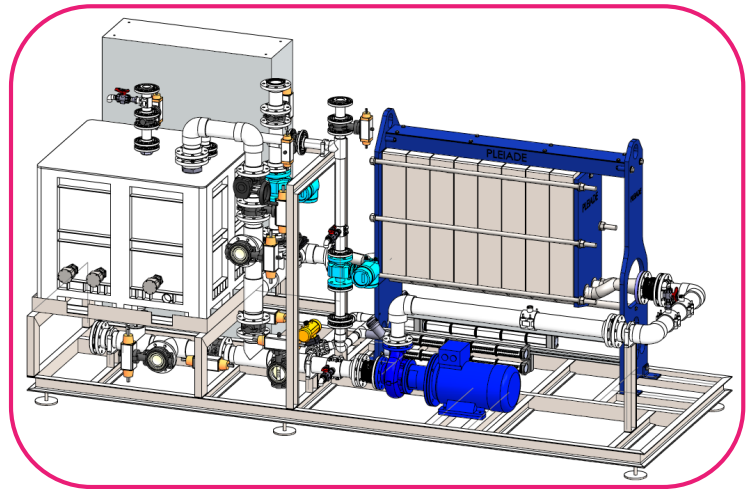
PLEIADE® systems offer robust and reliable performances for a wide range of applications with a permeate flow rate up to 6 m³/h and a recovery of 99%.

PLEIADE® systems are designed with 3 ranges of flow-rate capacities: small (1-2 m³/h), medium (3-4 m³/h) and large (5-6 m³/h).

PLEIADE® modules include PAN or PVDF flat-sheet membranes installed on plates (0.35 m²/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 kDa) to 200 nm. Alternative pore sizes are possible upon request.



ALSYS experience in the field of polymeric system technology

Industries	Applications	Benefits
<ul style="list-style-type: none"> Automotive Surface treatment Agriculture & Food 	<ul style="list-style-type: none"> E-coat paint bath recycling Demineralized rinsing water recycling Clarification Valorization of by-products 	<ul style="list-style-type: none"> Liquid product recovery and reuse
<ul style="list-style-type: none"> Automotive Surface treatment Leachate Feed & Food Chemicals 	<ul style="list-style-type: none"> Bioreactor post-treatment (MBR) COD reduction Waste volume reduction Pre-filtration for reverse osmosis 	<ul style="list-style-type: none"> Industrial and municipal waste water reuse or discharge

What makes PLEIADE® systems unique?

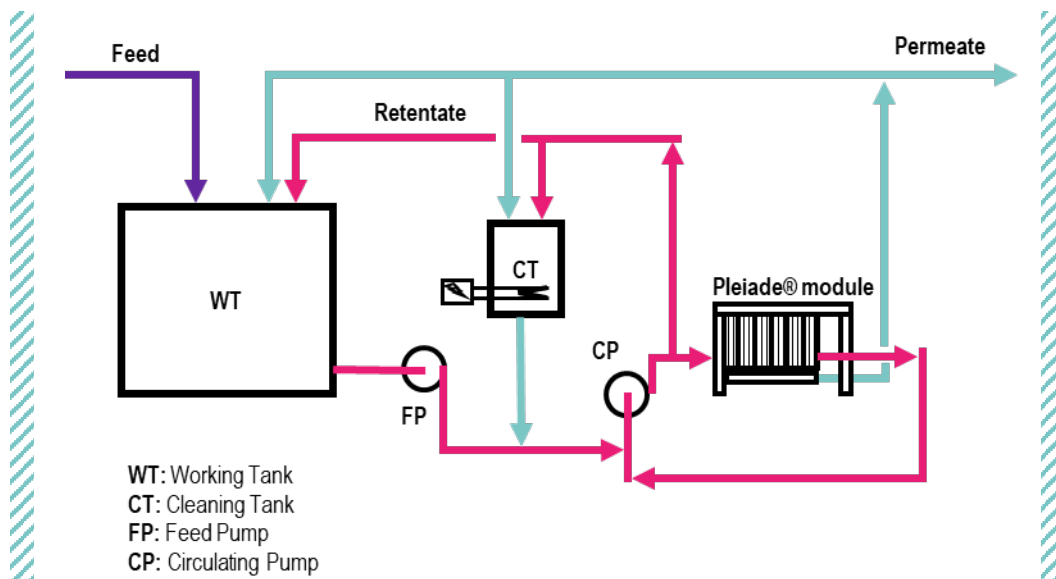
- Turnkey system, manual or fully automatic with HMI touchscreen
- Modularized design with 3 flow-rate capacities
- Easy maintenance: all membranes are accessible from ground level and can be individually isolated for troubleshooting during operation
- Compact footprint
- **Proven reliability with 30 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 membrane 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.



How the Pleiade® system works



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 m ²	46 m ²	70 m ²
• 1.65 mm gasket thickness	27 m ²	59 m ²	88 m ²
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 kDa) to 200 nm		
System recovery:	up to 99 % <small>(depending on solids content and application)</small>		

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

