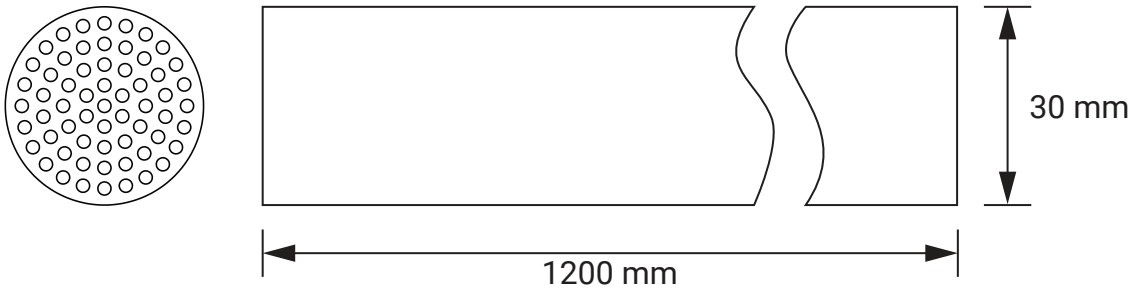
Multichannel Ceramic Membrane

Model Code: NPC-M-3061

General Specification	
Model Code	NPC-M-3061
Outer Diameter (O.D)	30 *mm*
Channel Count	61 (Circular cross-section)
Channel Inner Diameter	2.0 *mm*
Membrane Length	1200 *mm* (Maximum)
Filtration Surface Area	~0.460 m^2
Filtration Mode	Inside-out (feed in channels)
Flow Path	Axial feed, rapid permeation
Max. Operating Pressure	Up to 10 bar (material/module-dependent)
Operating Temperature	Up to 300°C (material/module-dependent)
pH Range	0–14 (material/module-dependent)
Porosity	45 ± 5%

Material & Coating Combinations

Support Material	Available Coatings	Key Features
Silicon Carbide (SiC)	SiC (fine coating)	Excellent chemical and thermal resistance
Alumina (Al_2O_3)	Ziroconia (ZrO_2)	High mechanical stability, acid-resistant
Alumina (Al_2O_3)	Titania (TiO_2)	Stable, biocompatible, suitable for bioseparations
Alumina (Al_2O_3)	Silica (SiO_2)	High water flux, chemically inert, limited alkali resistance
Mullite	Zirconia (ZrO_2)	Optional surface: superhydrophobic/superhydrophilic
Mullite	Silica (SiO_2)	Cost-effective, surface-tunable, moderate mechanical /thermal performance



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Multichannel Cramic Membrane

Model Code: NPC-M-3061

Separation Layer Options			
Membrane Type	**Pore Size**	**Pure Water Permeability (Nominal, LMH/bar)**	**Typical Applications**
Microfiltration (MF)	3 *μ*	~2200-2500 *LMH*	Prefiltration, Coarse solids removal, wastewater clarification
Microfiltration (MF)	1 *μ*	~1800-2200 *LMH*	Biomass separation, yeast recovery, food & beverage Prefiltration
Microfiltration (MF)	200 *nm*	~1200-1600 *LMH*	Bacteria removal, oil-water separation, suspended solids
UF/MF	100 *nm*	~800-1200 *LMH*	Cell harvesting, protein separation, microbial filtration
Ultrafiltration (UF)	50 *nm*	~400-800 *LMH*	Virus removal, enzyme separation, pharmaceutical clarification
Tight UF	20 *nm*	~200-400 *LMH*	Endotoxin removal, nanofiltration, biopolymer and viral clearance

Imp: Values represent nominal conditions at 1 bar pressure and 25°C using deionized water.

Application

- **Food & Beverage:** Clarification, microbial control, protein recovery
- **Pharma & Biotech:** Cell broth filtration, enzyme separation
- **Petrochemical:** Oil-water separation, catalyst recovery
- **Water Treatment:** MBR polishing, RO pretreatment

Advantages

- High channel density (61 channels) balances throughput and structural strength
- Optimized for low-fouling operation with 2.0 *mm* channels
- High chemical, thermal, and mechanical resistance for industrial duty
- Compatible with backflush and CIP for long-term reuse
- Modular design suitable for retrofit and new system integration
- Versatile material/coating options for customized performance

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