

Trustech Recognized as China High-Tech Enterprise for Its High-Consistency and Integrated Spinning System

JIADING, SHANGHAI, CHINA, January 7, 2026 /EINPresswire.com/ -- Shanghai Trustech Technology Development Co., Ltd. - one of China's premier providers specializing in hollow fiber membrane spinning machine

R&D/manufacture/service and flat sheet membrane casting machine

production has officially been recognized as a National High-Tech Enterprise. This prestigious accolade recognizes the company's vital contribution in further advancing



precision membrane fabrication equipment on an international market. At the core of this accomplishment lies [China Leading High-Consistency And Integrated Spinning System](#) - an advanced technological platform specifically designed to produce membranes with superior structural uniformity. By combining advanced fluid simulation and precision mechanical engineering, Trustech creates a stable production environment ideal for developing cutting-edge filtration and separation materials used in both medical and industrial environments.

1. Global Membrane Industry Trends and Technological Evolution

Precision in Separation Materials

The global membrane technology industry is experiencing rapid development due to increasing complexity of separation tasks in water treatment, biomedical engineering and gas separation applications. As businesses make strides toward sustainability and carbon neutrality, demand for high-performance hollow fiber and flat sheet membranes has grown significantly. Current market trends indicate a noticeable transition away from labor-intensive methods of production toward automated, high-consistency systems. This trend is most evident in high-stakes fields like carbon capture and biopharmaceutical purification, where uniform pore structures and membrane thickness have direct implications on efficiency and safety of separation processes.

Industry 4.0 and Localizing High-Precision Equipment

High precision equipment has become a central factor of modern life. Moving beyond general-

purpose filtration towards more specialized applications like hemodialysis and Extracorporeal Membrane Oxygenation (ECMO) demands consistency that only integrated, automated systems can deliver. China is rapidly shifting from being a mass producer to becoming a high-value innovator. Leading companies are investing heavily in research and development to expand their capabilities for high-end membrane production, specifically on microstructural integrity of the fiber membrane, which is determined by spinning machine precision and spinneret configuration.

Sustainability and Resource Recovery Trends

Beyond traditional filtration, industry trends have seen an unprecedented surge in membrane contactor usage for gas-liquid separation. This rise is being propelled by global environmental regulations demanding efficient methods for degassing and CO₂ capture. Trustech has observed that customers now require systems capable of operating under higher pressures and more corrosive environments requiring breakthroughs in material science breakthroughs for production hardware production systems. In order to understand how different polymers behave during phase inversion process requiring integration between mechanical precision with polymer science expertise to succeed.

2. Trustech Core Advantages and Technical Innovation

Trustech has established itself as an industry leader through their focus on R&D and precision engineering, creating world-class hollow fiber and flat sheet equipment solutions. Trustech offers complete solutions for hollow fiber production as well as flat sheet membrane casting using NIPS (Non-solvent Induced Phase Separation) or TIPS (Thermally Induced Phase Separation), handling complex polymers like PES, PVDF, and PTFE smoothly while producing consistent film formation at various production scales.

Trustech's Spinneret Manufacturing for Fiber Spinning

Trustech specializes in precision spinneret manufacturing for fiber spinning and employs state-of-the-art micro-machining technology to guarantee high concentricity and surface smoothness of their spinnerets. Precision is key in producing uniform wall thickness in hollow fibers and avoiding common defects such as fiber breakage or uneven flux rates. Trustech uses advanced manufacturing techniques and surface treatments to produce spinnerets that remain stable over long production cycles, even when processing viscous polymer blends. Their expertise allows the company to offer customized structures such as multi-bore or composite designs tailored specifically to client requirements.

Trustech Technologies Are Built on Patented Innovation and an Integrated Design Philosophy

Trustech's technological foundation is supported by over 40 approved patents covering spinneret design innovations and integrated system technologies used for its advanced generation production lines. By employing proprietary fluid simulation techniques, Trustech can optimize polymer dope flow within systems before manufacturing begins - this feature reduces commissioning times significantly while assuring high repeatability for final production lines.

3. Core Product Applications and Global Reach

The high-consistency systems developed by Trustech are widely deployed across critical applications, reflecting its dominant position in China's high-end market. The upgraded SpinMaestro 2.0 spinning system significantly improves precision and operational stability through advanced subsystems, including the SteadyiCore Ultra 2.0 heating system, TitanMix Pro 4.0 mixing system, PrimeGlider Pro 3.0 automatic pay-off, SmartCoil Elite 3.0 automatic winding, and StoutDrive 2.0 motor drive configuration, resulting in improved system stability, reduced commissioning and production downtime, and an overall spinning efficiency increase of 11.4%. These technologies enable the reliable production of hollow fiber membranes for medical applications such as kidney dialysis and oxygenation systems, support UF and MF membrane manufacturing for municipal water treatment and industrial wastewater recycling, and play a vital role in oxygen-nitrogen separation processes that promote cleaner industrial operations worldwide.

Global Partnerships and Market Footprint

Trustech's engineering excellence can be seen through its global clientele that spans 39 countries. Trustech has built itself up as an indispensable partner to membrane manufacturers looking to scale production using reliable, high-precision equipment backed by technical support that allows clients to optimize membrane chemistry for large-scale industrial manufacturing. Trustech stands by this global reach with AAA credit ratings and high tech enterprise certification as evidence of quality service provision.

Trustech stands out as a strategic partner by offering an all-in-one "one-stop" service model, from research and development through manufacturing. From flat sheet casting machines for high flux membrane production to complex multi-core spinnerets used for industrial separation processes, Trustech delivers customized designs tailored to match client material parameters. Their client-centric approach enables manufacturers worldwide to achieve stable high quality membrane production from initial concept through final integration into systems.

4. Conclusion: Envisioning the Future of Separation Science

Trustech's recognition as a National High-Tech Enterprise marks an important step forward in modernizing global membrane production supply chains. By combining precision mechanical engineering and polymer science, Trustech has successfully translated theoretical membrane performance to industrial scale applications. Their China Leading High Consistency and Spinning System represents their vision of providing more efficient, automated, and reliable separation technologies in the future.

Trustech Is A Global Industry leader. As Trustech expands its R&D efforts, it remains committed to meeting even the most complex membrane fabrication challenges head on. Utilizing its comprehensive service model and specialized equipment, Trustech not only supplies leading membrane manufacturers but acts as their strategic partner as well. They specialize in continuous innovation with top quality products for water treatment, medical applications, industrial separation systems and more - servicing global sectors including water treatment, medical treatment and industrial separation applications worldwide. Embarking upon global

expansion with engineering excellence as their core values, Trustech looks set to remain at the forefront of membrane technology innovation for years to come!

For more information regarding products, technical specifications, and corporate developments, please visit the official website: <https://www.xtrustech.com/>

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