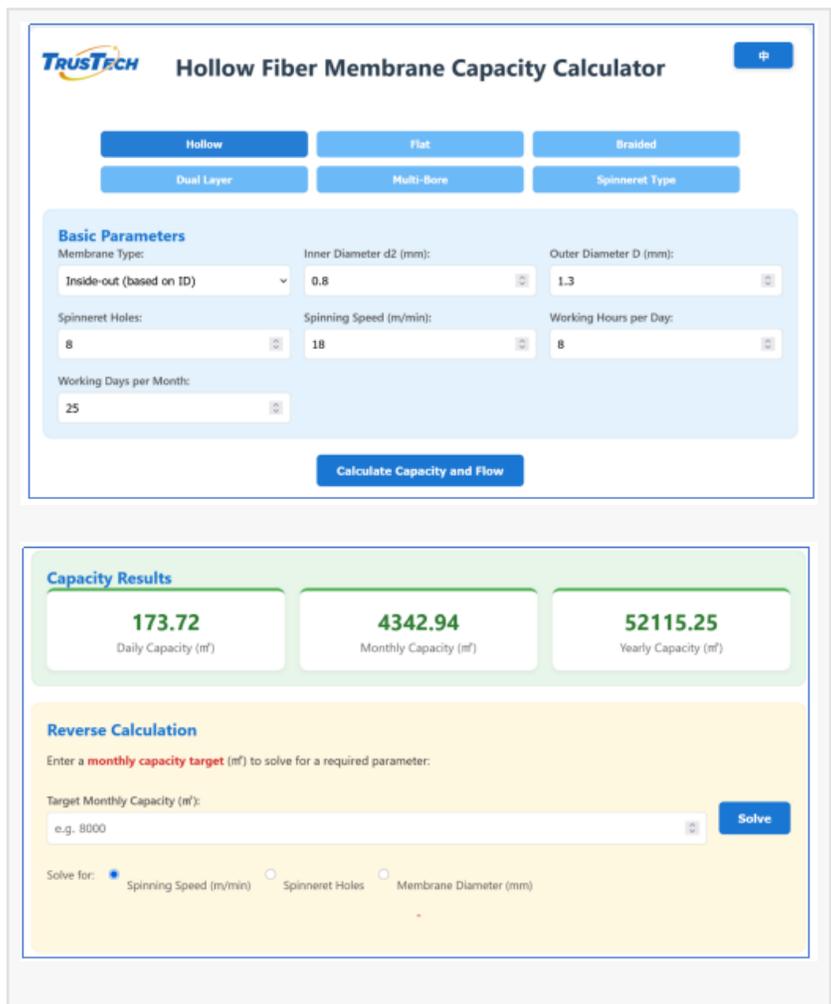# Empowering Membrane Process Engineers: TRUSTECH Launches the Online Assistant 'MEMTOOLS'

JIADING, SHANGHAI, CHINA, March 20, 2026 /EINPresswire.com/ -- Empowering Membrane Process Engineers: TRUSTECH Launches the Online Assistant "MEMTOOLS"
In capacity planning and production tuning for hollow-fiber and flat-sheet membranes, process engineers often face a common pain point: manual estimation for capacity, experience-based adjustments, and difficulty in spinneret selection. This not only lowers efficiency but also increases trial-and-error costs and uncertainty in equipment selection. To better serve customers and partners in the membrane industry and address this practical challenge, Trustech—a leading company in hollow-fiber membrane spinnerets and spinning equipment—has officially launched the online tool "MEMTOOLS" (memtools.cn). Aimed at the R&D and production of hollow-fiber membranes,

flat-sheet membranes, dual-layer dope composite membranes, and multi-lumen (e.g., seven-hole) filter membranes, the tool provides core functions such as capacity estimation, reverse configuration evaluation, process tuning parameter references, and spinneret specification search. It helps enterprises reduce repeated calculations and improve efficiency in solution development, equipment selection, and on-site process tuning.

I. Four Core Functions of "MEMTOOLS"
"Memtools.cn" is an online assistant tool built by Trustech based on its profound R&D and process experience in spinnerets and spinning equipment, tailored for membrane technology

engineers and process designers. Its core functions closely focus on key stages of actual production, aiming to improve work efficiency and process stability.

1. Capacity Estimation
Supports input parameters for internal-pressure/external-pressure hollow-fiber membranes, combined with spinneret inner diameter, outer diameter, and number of holes; flat-sheet width; coating thickness; spinning speed; as well as shift hours and working days per month. It automatically calculates daily, monthly, and annual capacity, reducing tedious manual calculations and cumulative errors.

2. Reverse Calculation and Configuration Recommendations
Based on the user's target monthly capacity, this function back-calculates required key equipment configuration parameters—such as pump model specifications, reactor volume, and number of spinneret holes—providing direct and necessary calculation references for production line planning and equipment selection.

3. Process Tuning Reference
Based on fundamental spinning parameters, the tool automatically calculates reference values for core liquid (bore fluid) and dope consumption per minute and per day, providing key data baselines for process engineers. This helps rapidly identify the supply–demand balance of the core liquid and dope, and accordingly adjust pump flow or speed and set suitable take-up speed, thereby stabilizing the spinning process and ensuring consistent fiber extrusion.

4. Spinneret Types and Specification References
The tool lists commonly used spinneret/spinneret-plate specifications for NIPS, TIPS, dual-layer dope composite membranes, braided-tube coating membranes, and multi-lumen (e.g., seven-hole) filter membranes, covering more than 210 specification reference items, providing fundamental parameter support for R&D selection, solution comparison, and directional pre-research.

5. Technical Accumulation Empowering Tool Development
Behind "MEMTOOLS" lies Trustech's more than ten years of technological cultivation and experience in hollow-fiber membrane spinnerets and spinning equipment. As the first domestic enterprise to produce spinnerets for medical hemodialysis membranes and break the monopoly of imports, Trustech has iterated to the 8th-generation "online core replacement without shutdown" spinneret-plate technology, and has accumulated over 50 independent intellectual property rights, including 4 invention patents and 12 software copyrights. Relying on 0.002 mm machining precision, its products are applied in environmental water treatment, medical hemodialysis, and gas separation, and are exported to 39 countries and regions including the

United States, Germany, the United Kingdom, France, Brazil, and Singapore, serving 634 customers worldwide. Trustech, together with industry leaders such as Ningbo Shuiyi Membrane, Jiangsu Jiuwu, Hunan Kangpuer, Jiangsu Menon, and Hangzhou Qiushi, formulated the group standard "Hollow-Fiber Membrane Spinneret Plate" (T/SHDSGY058-2022), promoting the industry's shift from "fragmented development" to "standardized competition." The release of "MEMTOOLS" is another move to transform standardized experience into practical tools, further lowering technical barriers, enhancing overall process capability, and helping industry users achieve capacity and quality goals more efficiently and reliably in solution design and on-site operations.

II. Typical Application Scenarios
- New line planning: Start from target capacity, back-calculate equipment and key component configurations, and provide scientific references based on data.
- On-site process tuning: Calculate core liquid and dope flow rates, assist in adjusting pump speed and preparation strategies, quickly locate process or tuning issues, and improve efficiency and extrusion stability.
- Spinneret specification selection: Based on the database of spinneret types and specifications, reference and compare spinneret specifications under different processes and types to provide necessary support for R&D and production.

III. Launch and Usage
- Access: www.memtools.cn
- Intended users: Membrane material and module companies, equipment manufacturers, process/R&D engineers, and related teams in universities and research institutes
- Next steps: Based on user feedback, continuously refine parameter definitions and the specification database, and enrich applicable scenarios and data validation rules.

Note: This tool is intended to provide references for engineering calculations and process tuning. Specific production parameters and equipment selection should be determined in combination with each enterprise's actual conditions and validation results.

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