



# WORKS™ system components

## How it WORKS™

Applications development and customer support



Works™  
Optimization  
Procedure

The Optimization Procedure provides a detailed protocol and data collection instructions to optimize *SmartFlow*™ TFF based separations. Systematic evaluations of membranes, process conditions, and sample make-up are featured.



Works™  
Case Study

The Case Study provides examples of how others have applied the principles of the Optimization Procedure to their specific application.



Works™  
Protocol

Where appropriate, NCSRT has developed a simple protocol to address specific applications. Protocols provide exact instructions including membrane, pore size, filter area, and shear to achieve >90% yield in most cases. The protocol is not optimized for any individual product, but for classes of products like Mabs, phage, and whole cells. Designed to provide acceptable results for over 80% of those who try it, the protocol is an excellent way to jump start the improvement in your separation efficiency while you optimize the *SmartFlow* filter process.



## Products

OPTISEP® filter modules - utilizing the patented *SmartFlow* technology to assure the optimum performance and yield in your critical biopharmaceutical application.

PUROSEP™ filtration systems - state of the art filtration systems that incorporate over 25 years of systems design experience to provide unparalleled operational efficiency, ease of use, and quality.

CONSEP® filter modules - apply *SmartFlow* technology to food, beverage, and chemical applications benefiting from optimized TFF solutions and the economics of improved yield and lower operational costs.

CHROMAPURE™ chromatography control systems - designed with the input of hundreds of manufacturing operators, the industry leader in ease of use, programming elegance, and reliability.

StepWise™ software - developed by working side by side with industrial chromatographers, production managers, and QA personnel the StepWise software incorporates the ease of use operators love, the system definitions and recipe builder modules managers count on to accurately describe their process, and the control and security QA requires.

## AT- WORKS™ Services

FAT program - Industry leading FAT program to assure your system operates the way it was designed to before it leaves the factory. Accompanied by a comprehensive documentation library, the systems ship ready to install.

SAT program - On-site acceptance testing to assure there were no problems during transit or installation and that the programming and control systems integrates to the plant SCADA system as it was designed.

On-site customer support - depending on your needs, NCSRT offers operational, engineering, software, training and applications support programs to meet your specific requirements.

On-site system maintenance - Both annual and semi-annual system check and calibration services. System checks include replacement of elastomer seals, o-rings, and valve diaphragms.

On-site operator training - cGMP compliant training programs for the safe operation of PUROSEP and CHROMAPURE systems.

Custom support programs - if you have needs that are not covered by the standard NCSRT AT-WORKS programs, contact your regional representative to design a program for your company.

**NCSRT, Inc.**  
1000 Goodworth Dr.  
Apex, NC 27539  
USA

**Phone: +1 919 387 8460**  
**Fax: +1 919 387 8540**  
**email: [info@ncsrt.com](mailto:info@ncsrt.com)**  
**Web: <http://www.ncsrt.com>**