

**ARTISAN**  
Industries Inc.

Since 1934 Artisan experts have led the way providing integrated solutions to the most challenging separation problems. We combine an innovative approach with an unparalleled depth of knowledge to develop cost effective, practical solutions. Designed and built to exacting standards, our powerful technologies have enabled us to succeed where our competitors have failed. That is why the Artisan name is synonymous with unrivaled product quality and level of service.

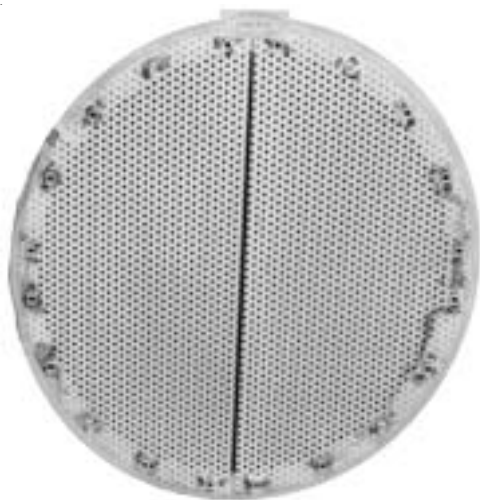


# The Artisan **Dualflo<sup>®</sup>** Tray

**...for distillation and stripping of solids containing and fouling solutions**

## *Can You Afford Not To Investigate the Dualflo Tray for Solids Containing or Fouling Service?*

Nothing is more costly than downtime in a chemical or pharmaceutical processing plant. The Dualflo tray has been used for over 30 years in over 70 installations in sizes ranging from 6 inches to 7 feet. This extensive experience is available to you when more conventional trays are unsuitable for the solids containing or fouling solutions you are faced with processing.

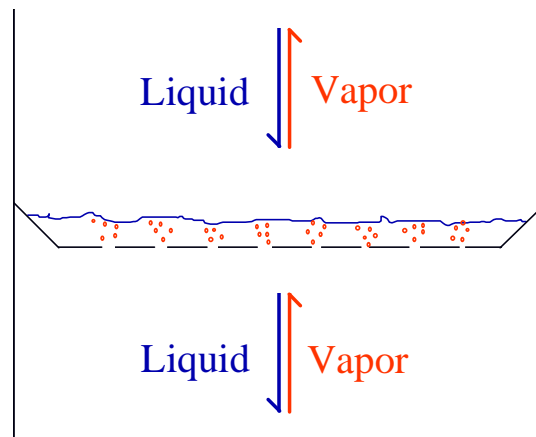


## *Why the Dualflo Stays Cleaner for Longer*

Designed specifically for processing solids containing or fouling solutions, the Dualflo tray has minimal crevices and creates turbulence which scrubs the openings.

## *How the Dualflo Works*

With no downcomer, the liquid and vapor streams flow countercurrent to each other through the same openings in the tray.



## *Lower Capital and Maintenance Costs*

The simple Dualflo design results in a lower capital cost than for more complicated trays. Designed for simple installation, removal and cleaning the Dualflo tray can be taken out and put back into service quickly. Coupled with the need for less frequent cleaning, lower maintenance costs can be expected.

### **Approximate Operating Parameters:**

Pressure Drop: ½" to 4" fluid

F Factor: 0.6 to 2.2

Efficiency: Equal to or higher than bubble cap or sieve trays with downcomers.



## Capabilities

- Problem definition
- Feasibility testing
- Design new processes
- Optimize existing processes
- In house or on site testing to establish scale up data and demonstrate process viability
- Calculate economic feasibility
- Equipment design & specification
- Equipment manufacture
- Complete system supply
- After sales support

## Family of Products

The Artisan family of thin film technology products for the chemical, pharmaceutical and food industries includes:



- The **Rototherm®** horizontal, thin film, mechanically aided **evaporator/reactor**, which can achieve 99% evaporation in a single pass with no burn-ons. As a reactor, it provides unparalleled flexibility for carrying out complex reactions, even producing solids in a single step.

- The continuous **Evaporator / Stripper™** which, with no moving parts, can reduce volatiles in heat sensitive materials to low ppm or even ppb levels.
- The **Controlled Cycle Liquid/Liquid Extraction Column** with no moving parts on the column which requires less density differential and can be twice as efficient as conventional systems. Even slurries can be processed in this advanced technology extractor.
- **Pervaporation** membrane technology which can break azeotropes and dry solvents to >99%.

## Pilot Plant

A complete on-site pilot facility is maintained to demonstrate our proprietary process equipment on specific applications and to obtain data for designing systems. Our pilot plant, the most versatile in the industry, is custom assembled to meet the specific needs of each customer.

Laboratory bench scale size equipment is also available for use when you can only provide a limited amount of sample for testing.

We can operate from -40° F to 750° F, and from 10 microns to 50 psig. The Artisan Pilot Plant is also able to meet the sanitary requirements for processing food grade materials. We can supply our 2" x 13 stage Evaporator/Stripper™ and our 1 sq. ft. Rototherm® rental units for use at your site.



Our pilot plant is equipped with an advanced real time data acquisition system featuring computer graphics, allowing on screen simulated process

runs. This state of the art data logging system is invaluable when analyzing process control data for scale up.

## Custom Systems

Artisan's in-house chemical engineering staff offers complete, custom designed and fabricated systems. Our project teams can take total system responsibility for all aspects of the design and fabrication of your system. We offer complete control systems, either stand alone or fully integrated into your distributed control system.

## We Invite Your Inquiry

Artisan Industries Inc.

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