



CREAFLOW

Scalable flow Reactors

Presents HANU™ Flow Reactors

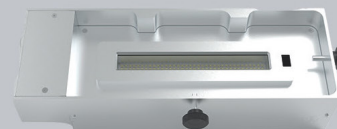
Your Ultimate Toolbox
for scalable Flowchemistry

Lab to Production Scale
5mL – 15mL – 150 mL

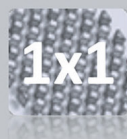
Extended T/p range
Up to 150°C / 25 bar

Irradiation Sources 

- Wavelength: 365, 395, 420, 450 nm
- Tuneable light intensity

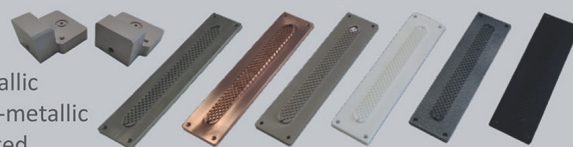


Static Mixing Element
Configurations



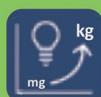
Process Inlays & In/Outlet Ports

- Metallic
- Non-metallic
- Coated



SS 316L, HC276, Tigr2, E-Cu, PTFE, PEEK, SiC, etc.

Unique Features



Scalable UV & VIS Photochemistry

Seamless single-technology scale-up strategy for both UV & VIS Photochemistry



Long Residence Time Reactions

Continuous one-pass operation with no need for recirculation



Demanding Multi-phase Reactions

Effective mixing of immiscible liquids and solid particles in suspension at any flow rate



Multi-Purpose Solution for cGMP Production

'open-shell' system, disassembly allows straight-forward physical cleaning and swab sampling



Non-invasive Inline Reaction Monitoring

Through-window PAT methods (i.e. Raman, NIR) or visual inspections



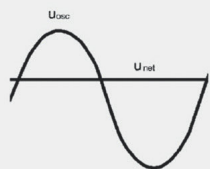
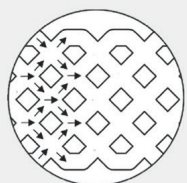
Visual Inspections

Inspection window to visually monitor and understand your particular process

Working Principle: COSTA™ Technology



◆ Continuous processing in a linear plate flow reactor



◆ Oscillating flow regime

◆ **STA**tic mixing elements located in process channel

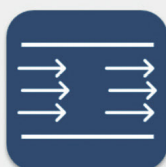
Excellent process control



Low Flow
Mixing

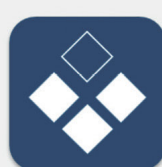


Temperature
Control

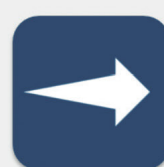


Plug Flow
Profile

Single-technology scale-up strategy



Assembled Unit
Modularity

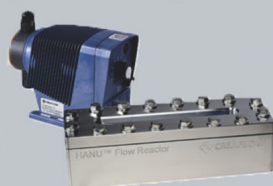


Linear
Scalability

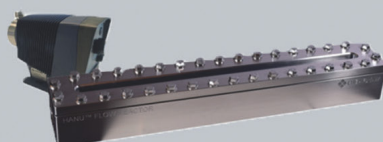


Multi-ton/year
Production

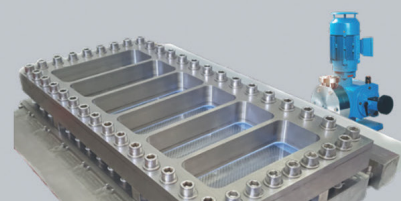
Products



HANU™ 2X 5



HANU™ 2X 15



HANU™ HX 150

Laboratory R&D

mg/h – g/d

Process Development

g/h – kg/d

Pilot & Production

kg/h – multi-MT/y

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