

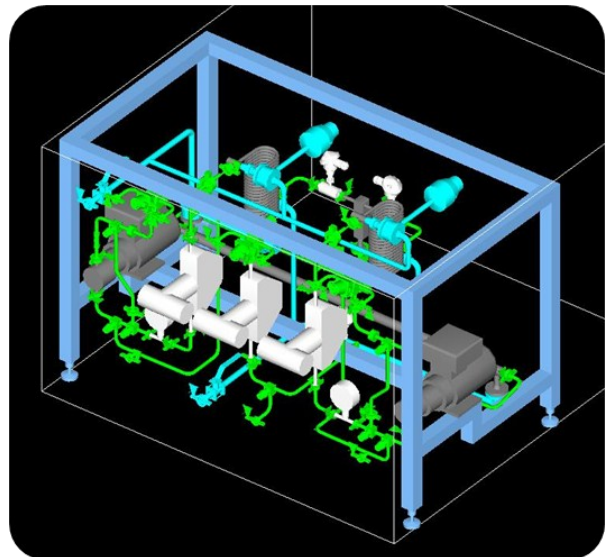
# Detailed Engineering

## Optimal Design through our Deep Process Understanding

Our highly-skilled and experienced engineers are dimensioning the different subsystems of the plant, including pumps, heat-exchangers and tank farm. Specification sheets are created, equipment selection will be finalized and the final required equipment is requested. In the prepared 3D-designs we particularly focus important issues such as optimization of hold-up volumes, avoiding of dead volume, narrow residence time distribution and enhanced usability. Naturally cGMP- and ATEX-compliant designs are available for all plant systems. Microinnova will handle all of your concerns to realize your manufacturing plant.

### Results & Services:

- dimensioning of the main system
- specification and selection of all installation parts
- Valve and piping component planning
- construction & layout planning
- 3D-design
- automation concept and integration
- qualification support (DQ)
- requirement specification



### Benefits:

- **MICROINNOVA is the specialist in flow-chemistry and process intensification**
- **optimal design achieved through our deep understanding of the process by support of the in-house process development team**
- **independent in selection of plant equipment (e.g. reactor)**
- **use of database-driven planning software guarantees high degree of planning quality**
- **3D-model for visualization of the planned manufacturing plant**