MICRO-REACTION TECHNOLOGY
engineered by one-A

www.one-A.at
THE ECONOMICALLY BETTER ALTERNATIVE

You think this one-A technology is expensive? You are mistaken. It allows moving from research to production within the shortest delays. The micro-structure reactor of one-A is equally suited for R&D and production purposes, grown in line with your demands, and thereby saves costs.

As required, the move from product and process development to production is made either by “numbering up” or by “scale up”. By selecting the optimal reactor and plant configuration on the basis of the tests made, you will minimize error sources, reduce the risk, and save time. These are but three reasons for the cost savings as compared to conventional technologies.

Significantly less waste is generated during production thereby increasing the production yield and enhancing product quality. Discontinuous production in large batches is a thing of the past! Demand-oriented production in these compact, space-efficient micro-reactors allows optimizing and/or reducing stocks. At the same time, the waste volume is reduced while the output is increased and the quality is enhanced.

PLANT VALIDATION UPON CUSTOMER REQUEST

Validation and qualification according to GMP and cGMP guidelines
Certification of small components according to GIP
Certification of overall plant units according to GMP including CE marking
FDA compliance for use in pharmaceutical and food processes

THE PATENTED one-A MICRO-REACTOR – ALL BENEFITS AT A GLANCE

Exceedingly fast mixing
Efficient heat transfer
Short and precisely adjustable retention times
High-operational safety due to minimum hold-up
Safe control of hazardous reactions
Removal of side-products
Robust design for reactions generating high pressures
Low consumption of feedstock (up to -30%) and reduced waste
Excellent heat management
Homogeneous mixing of the reactants
Avoidable regarding reactant in overestimation
Multiple reactions in one reactor feasible
Easy cleaning and product change-over within the shortest delays
Extremely longevity due to use of top quality materials
Condensation and extracted residual components with almost unlimited flexibility

FIELDS OF APPLICATION - REFERENCES

- Companies active in chemical research, development and production who want to move directly from research to production.
- Companies active in the following sectors:
  - Pharmaceuticals
  - Fine chemicals (e.g. crop protection, food & beverage, cosmetics)
  - Specialty polymers (e.g. conductive, synthetic polymers, OLEDs)
  - Fat chemicals
  - And many more

THE NEWLY PATENTED MICRO-REACTOR BY one-A

Are you working in the pharmaceuticals, fine chemicals or specialty polymer/engineering polymer industry? Are you interested in curbing the reaction times of chemical synthesis reactions also under high pressure and elevated temperature? One-A has found the answer to your question.

The newly patented micro-reactor of one-A is an example for a micro-reaction technology that has come of age. As a reaction vessel, it combines the advantages of other comparable reactors with no or minimal disadvantages and as a consequence, works much more efficiently than other comparable reactors. This technology developed by one-A is a further development of conventional reaction vessels. Reactors designed by one-A are made from stainless steel but from pressure vessels on ships, a highly efficient reaction vessel, has proven itself by practicability and operation. The ability for lower flow rates, smaller and lower temperature gradients as compared to glass reactors. The targeted continuous mixing and a stirring system generated by a variable and 参数可调整的搅拌器 of this micro reactor.

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one-A, YOUR PARTNER FOR RESEARCH, DEVELOPMENT AND PRODUCTION

You think that your requirements are so special, that this technology is not suited for you?

Upon request, one-A will supply single-source solutions developed in close cooperation with your team. The overall package includes the following components: the micro-reactor, peripherals (piping, pumps), instrumentation as well as the control system, automation and software. The reactor can be integrated into the process either by one-A or by yourself. If the reactor is intended to operate as a stand-alone unit, one-A will be pleased to supply the corresponding single-source solution.

In the framework of the joint process development any problems and limitations that may exist are already identified in advance and can thus be solved. This iterative procedure guarantees a successful implementation of your process.