

## STEPHAN VACUTHERM® SYSTEM

Economic batch production





## STEPHAN VACUTHERM® SYSTEM

### SEVERAL PROCESS STEPS IN ONE MACHINE

The STEPHAN Vacutherm® System is a compact process unit. It has been designed mainly for the production of convenience food. Several process steps are combined in one machine. The processing of liquid and solid ingredients can be done as well as incorporation of particles.

The STEPHAN Vacutherm® System has been developed and optimized with the collaboration of convenience food manufacturers. Precisely controlled processes result in high product quality and repeatability. The highly flexible system produces a wide range of food products.

### ADVANTANGES FOR YOUR PRODUCTION

- STABLE EMULSIONS
- SHORT BATCH TIMES
- GENTLE AS WELL AS EFFECTIVE HEATING
- CONSTANT SPECIFIC WEIGHT
- OPTIMAL POWDER DISPERSING
- HOMOGENEOUS MIXING
- OXIDATION IS AVOIDED
- CONSTANT PRODUCT QUALITY
- GOOD CLEANABILITY
- EASY TO OPERATE
- EXPANDABLE



## APPLICATIONS (SOME EXAMPLES):

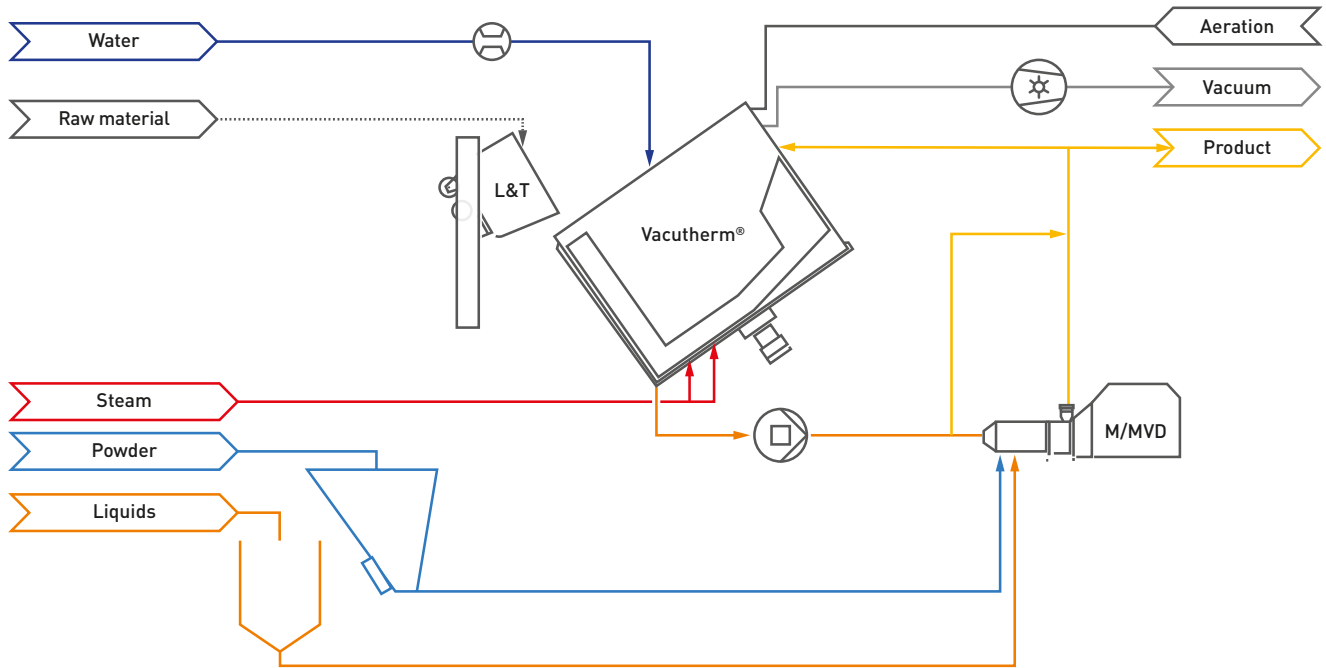
- /// MAYONNAISE
- /// KETCHUP
- /// DRESSINGS, DIPS
- /// BABY FOOD
- /// CLASSICAL SAUCES
- /// PASTA SAUCES
- /// SOUPS
- /// FRUIT PREPARATIONS
- /// PROCESSED CHEESE

## PROCESSES:

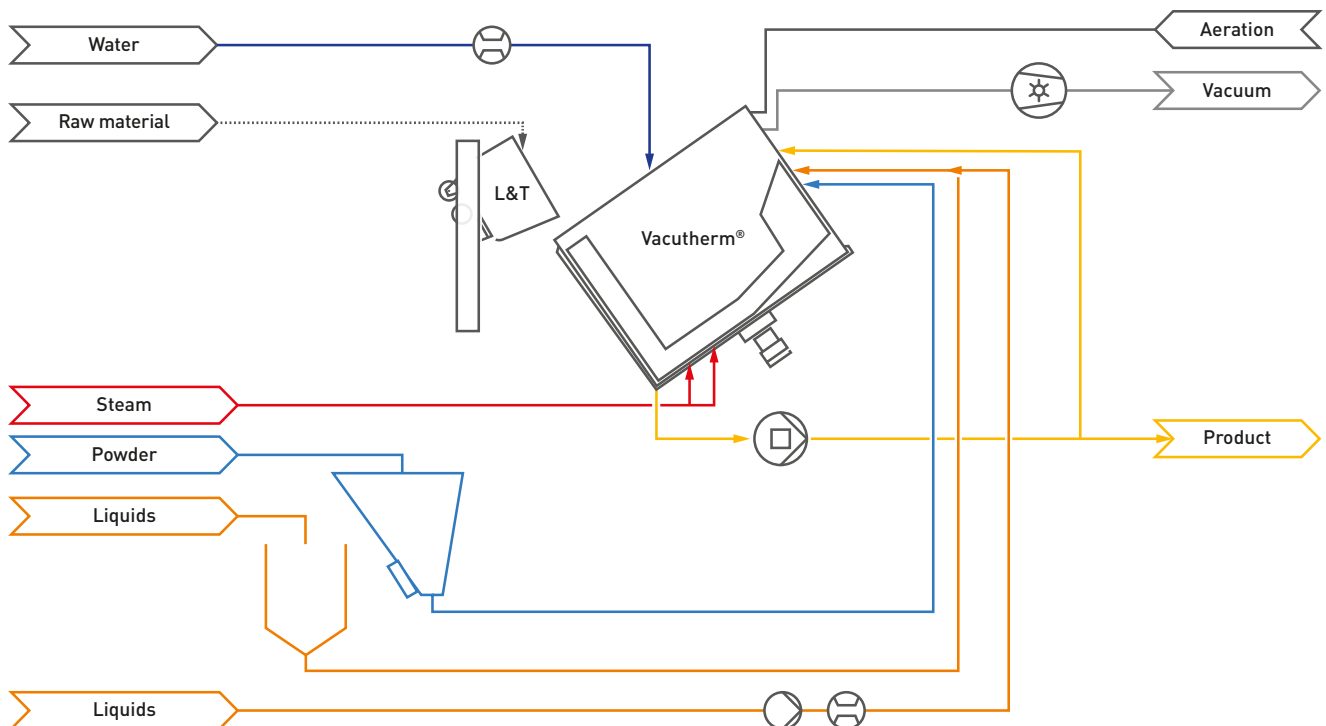
- /// MIXING
- /// EMULSIFYING
- /// DISPERSING
- /// SIZE REDUCTION
- /// DIRECT + INDIRECT HEATING
- /// DEAERATING (VACUUM)
- /// COOLING

# FUNCTION OVERVIEW STEPHAN VACUTHERM®

## STEPHAN Vacutherm® V-MC



## STEPHAN Vacutherm® VM





# DESIGN OF THE STEPHAN VACUTHERM® SYSTEM

The compact system combines several process steps in one machine. These are mixing, dispersing, size reduction, heating, cooling, pasteurizing, deaerating and emulsifying. The processing of liquid and solid ingredients can be done as well as the incorporation of particles. Furthermore products can be processed hot as well as cold.

The base components of the process system are a tilted, vacuum tight mixing vessel with integrated mixing arm and an external homogenizer (rotor-stator). The specific geometry of the vessel and the mixing arm allow for effective and gentle mixing of the ingredients at the same time. The external homogenizer is used for emulsification and size reduction. A pump connected at the lowest point of the vessel circulates the product through the homogenizer and back into the vessel.





## DESIGN OF THE STEPHAN VACUTHERM® SYSTEM

The homogenizer, a rotor-stator-system, can be used for a wide range of applications.

Besides homogenizing liquids it can be used for dispersing powders into liquids. When emulsification and homogenization is finished particles can be added into the vessel. They are blended gently with the liquid by the mixing arm. The product can be heated up either by direct steam or indirectly through the double jacket of the system. The recirculation pump can be operated as a discharge pump as well. An integrated vacuum system completes the system. It consists of a

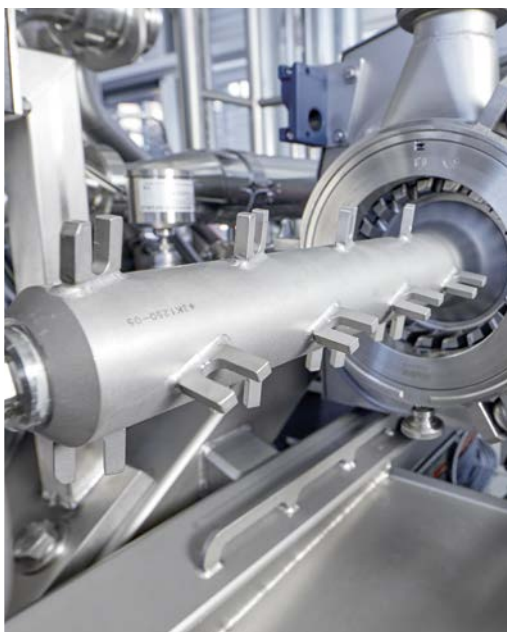
vacuum pump and a control unit. The ingredients can be fed into the system either by via suction pressure or by special metering systems.

The STEPHAN Vacutherm® System can be operated manually as well as automatically. Beside machine operation, recipe management and process flow data are included in the automation system. Parameters such as metering, mixing, emulsifying and homogenizing times, temperature curves, vacuum level as well as discharge times are controlled and regulated.

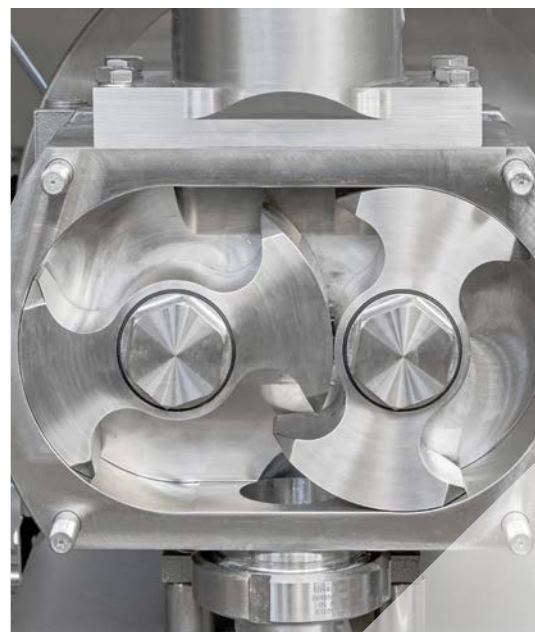
Processing vessel



STEPHAN Microcut®



Recirculation and discharge pump





## TECHNICAL DATA

Type		V-MC 401/15	V-MC 801/150	V-MC 1201/150
Batch size (l)	approx.	400	800	1200
Capacity (depending on product) (l/h)	approx.	1600	3200	4800
Homogenizer type (rotor-stator)	single cut	MV 15	MV150	MV 150
Homogenizer type (rotor-stator)	double cut	MVD 15	MVD 150	MVD 150



STEPHAN Vacutherm®  
V-MC 401/15



STEPHAN Vacutherm®  
V-MC 801/150



STEPHAN Vacutherm®  
V-MC 1201/150

The machines shown are for illustrative purposes only. Actual machine construction may vary by specification.

## TEST FACILITIES

The test facilities at our headquarters in Hameln (Germany) are available for feasibility studies and demonstration runs.



# Stephan Machinery

## WORLD WIDE AT YOUR DISPOSAL

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