

IKA®

Standard Production Plant SPP



Designed
to work perfectly

Standard Production Plant SPP

2 Cost effective mixing plant solutions

Applications

Food:

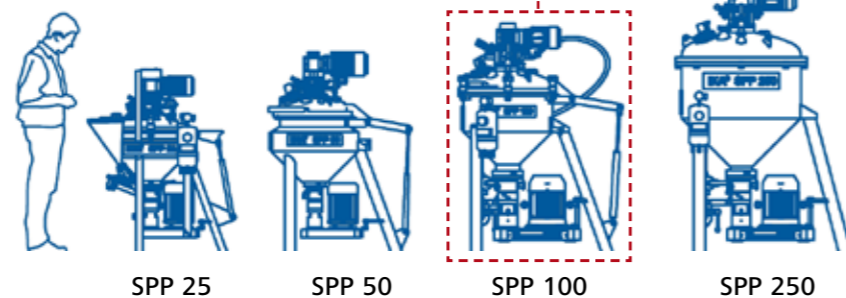
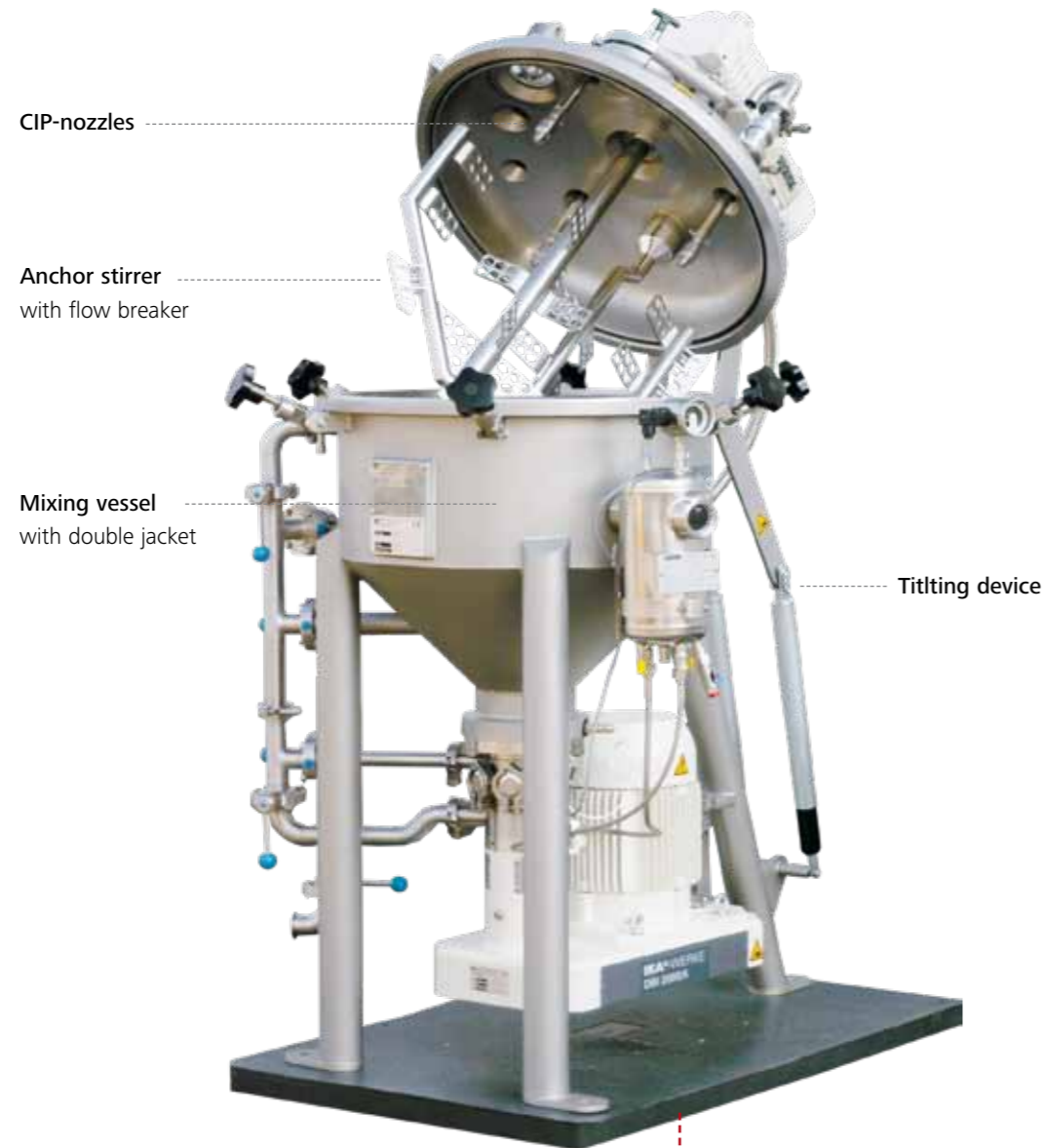
Sauces
Dressings
Mayonnaise
Liquid spices
Cheese spread
Ready-to-serve-meals
Baby food
Jams
Pet food
Starch solutions
Alginate

Beverage:

Fruit juices
Vegetable juices
Milkshakes
Protein drinks
Liqueurs
Sugar solutions
Flavours

Cosmetics:

Creams
Sun protection products
Perfumes
Shaving cream
Decorative cosmetics
Shampoo
Body-care products
Conditioners
Hand washing paste
Liquid soap
Tooth paste
Collagen suspensions
Carbopol emulsions

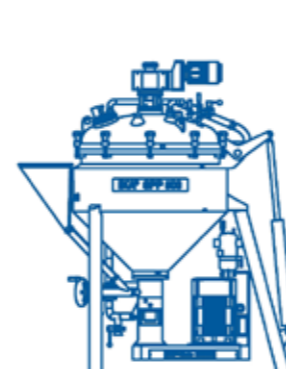


SPP 25

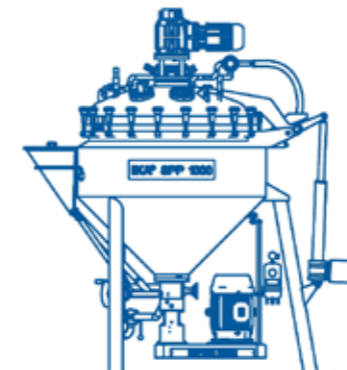
SPP 50

SPP 100

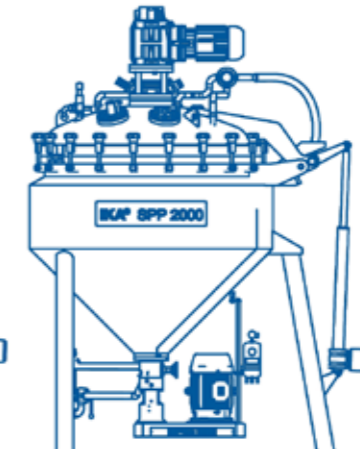
SPP 250



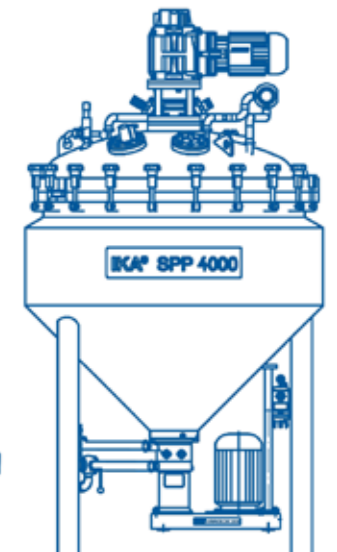
SPP 500



SPP 1000



SPP 2000



SPP 4000

Standard Production Plant

Executed in IKA® quality 3

Incorporating vessel cover tilting device

The IKA® Standard Production Plant is a highly modern but cost effective mixing plant for all basic operations requiring mixing and dispersing technology.

The clear concept and use of proven machines allow easy operation and a guarantee for reliable and constant mixing quality.

Due to its unique vessel geometry the IKA® Standard Production Plant is distinguished by its extremely low constructional height. The vessel cover can be opened by means of a tilting device, thus enabling easy access to the vessel for all maintenance work or visual checks with a minimum space requirement.

The circulation loop is divided into short or long circuits, depending on the batch size required.

Advantages of IKA® Standard Production Plant

- Cost effective version or alternative to Master Plant.
- Highly customizable, allowing for very simple to sophisticated configuration.
- Retains all essential feature of Master Plant at economical price.



Optional dosing funnels

- Separate feeding of solid or liquid additives directly into the dispersing chamber.
- Additives incorporated without applying vacuum in the vessel.
- No floating of powders or difficulties in wetting.

Standard Production Plant SPP

4 Incorporating multifunctional dispersing machine DBI 2000

Applications

Can be customised on request for use in the:

Pharmaceutical industry:

Ointments
Gels
Eye drops
Eye ointment
Cough mixtures and similar
Infusion solutions
Sugar-/salt solutions
Suppository masses
Coatings
Lotions (W/O resp. O/W)
Paraffin emulsions
Lipid emulsions
Antiseptics
Serum
Vaccines

Chemical industry:

Cleaning agents
Polishing agents
Sliding agents
Lubricant
Hotmelt adhesive
Corrosion protection agents
Wax emulsions
Ceramic suspensions
Polymer emulsions
Silicone emulsions
TiO₂-suspensions
Colloidal solutions
Catalyst suspensions
Impregnating agents
Pesticides, Fungicides

The multifunctional two-stage mixing and dispersing machine DBI 2000 is at the heart of the plant. It is directly mounted to the bottom of the vessel and combines the essential functions of a mixing plant in one machine:

- Pumping, with or without shear
- Suction of additives
- Gentle mixing
- Effective dispersing
- Cleaning by means of rotating CIP-nozzles moulded on vessel cover

The innovative design ensures quicker processing times and optimum dispersing quality over an extremely wide range of viscosities. For applications with varying viscosities, e.g. up to approx. 100 Pas, it is beneficial to integrate the plant with frequency converter.



Mixing vessel
with conical bottom

Circulation Loop
with 2-way
flap valves

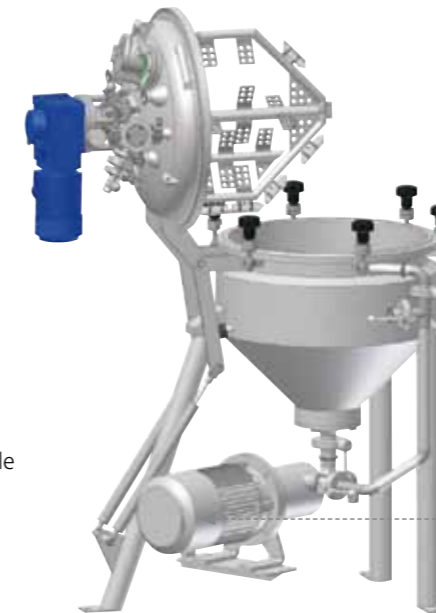
High-capacity
dispersing machine
DBI 2000

DBI 2000 / UTL 1000

Patented design for challenging processes 5

Simplified inline dispersing machine type UTL 1000

- Low heat loss
- Low sound level
- High-quality seals
- Excellent operational safety
- High economic efficiency
- Low investment costs
- Production of long-term stable dispersions of high quality.



Ultra-Turrax® UTL 1000

As an alternative to the DBI 2000, the inline dispersing machine type ULTRA-TURRAX® UTL 1000.

Pumping, Suction, Mixing, Dispersing, Cleaning

Direct Batch Inline

The DBI 2000 is the heart of the Standard Production Plant. Innovative technical design enable better process data and reduced processing times at optimum dispersing quality and wide viscosity range.



The DBI 2000 can be integrated with existing system or process to replace other older inefficient inline machines. Our engineers would be pleased to advise on this possibility.



Standard Production Plant SPP

6 Perfectness in detail: Mixing plant in an economical and flexible design

Vessel cover:

The Standard Production Plant is available with tilting devices for the vessel cover in two possible configurations. The manual control system for plant sizes up to SPP 250 and the electrical (Semi-auto control system) for plant sizes starting from SPP 500.



Agitator design:

The Standard Production Plant is equipped with anchor stirrer and flow breaker that can be used with frequency converter, which are optionally available. This offers significant advantages for the handling of different viscosities. Suitable for viscosities up to approx. 100,000 mPas.



CIP-cleaning:

A minimum of three spray nozzles ensures thorough cleaning without dead spots or shadow areas. Sufficient pressure and throughput to feed the spray nozzles is created by the dispersing machine DBI. There is no need for an additional CIP-pump.

Scale-up from laboratory to the large-scale production

Develop new products and optimize your processes with the IKA® systems Standard Production Plant in the laboratory with pilot plant sizes SPP 25 or SPP 50!

The same design ensures identical operation and provides an easy scale-up of pilot processes to plants with higher production capacities.

Typical applications for the Standard Production Plant

This mixing plant can be used for the production of solvents, emulsions and suspensions in many applications. It is available in 8 sizes ranging from 25 to 4000 litres.

Depending on its execution, the IKA® Standard Production Plant can be used for cosmetic cream and lotions, for mayonnaise or dressings in the food industry as well as for suspensions and emulsions in the chemical industry or for production of paints and lacquers.

Based on our long experience with many applications in the food, chemical and pharmaceutical industries, IKA® is your competent partner for all process plants. In order to select the best configuration for your specific application, our test facility is staffed by experienced application engineers and equipped with diverse range of lab and pilot equipment to qualify the appropriate equipment for applications.



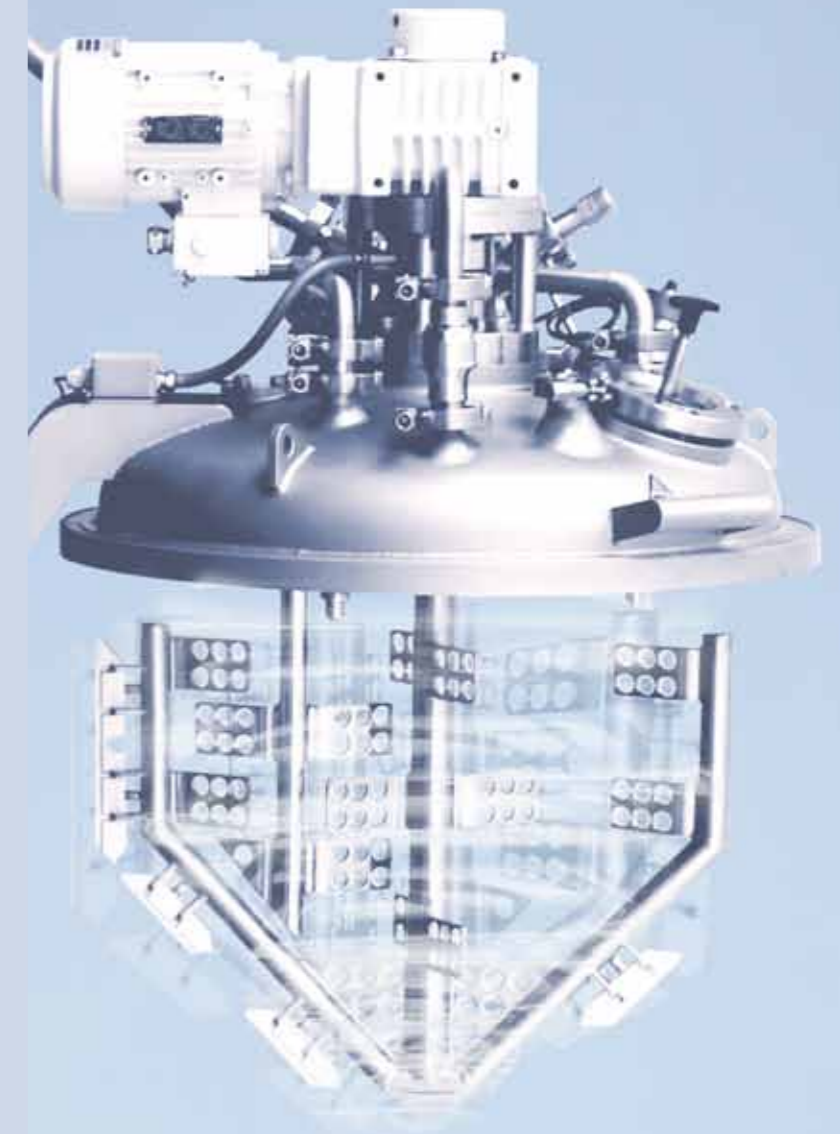
Simplified scale-up by identical geometries for all sizes

Sizes starting from 25 litres up to 4000 litres useful volume

IKA® QUALITY

Essential advantages of the Standard Production Plant

- Viscosity range from liquid to paste (approx. 100 Pas)
- Feeding of solid or liquid additives without vacuum in the mixing vessel
- Formation of lumps is avoided by direct feeding of the additives into the dispersing chamber
- Treatment of smallest quantities down to approx. 15% of the maximum working volume
- Separated circulation loop (short/long) for minimizing of dead spots and loss of material
- CIP-cleaning, for which the DBI 2000/.. serves as pump and feeds the rotating spray nozzles
- Exchangeable dispersing tools
- Mixing and dispersing quality adjustable
- Low maintenance
- The geometry of vessel and mixing units enables excellent scale-up possibilities
- The complete plant can also be supplied in Ex-protected execution acc. to the 94/9 EG (ATEX 95) guidelines
- The complete plant can be sterilized with steam (SIP)
- Direct steam injection is optionally available
- Customer specific requirements on request
- Cost effective mixing plant



Standard Production Plant	SPP 25	SPP 50	SPP 100	SPP 200	SPP 500	SPP 1000	SPP 2000	SPP 4000
Mixing vessel (l)								
Min. useable volume (ltr)	8	15	30	75	150	300	600	1200
Max. useable volume (ltr)	25	50	100	250	500	1000	2000	4000
Agitator								
Type	RFG-01	RFG-02	RFG-03	RFG-04	RFG-05	RFG-06	RFG-07	RFG-08
Anchor Stirrer (min ⁻¹)	20 to 60	18 to 54	14.4 to 43.2	10.8 to 32.4	8.4 to 25.2	6.8 to 20.4	5.6 to 16.8	4.4 to 13.2
Drive Power (kW)	0.37	0.55	0.75	1.1	1.5	3	4	7.5
Dispersing machine DBI								
	DBI 2000/4		DBI 2000/5		DBI2000/10		DBI 2000/20	
Drive Power (kW)	4	4	7.5	7.5	18.5	18.5	45	45
Alternatively:								
Dispersing machine UTL100								
	-		UTL 1000/10		-		UTL 1000/20	
Drive Power (kW)	-		7.5		-		22	
Dimensions (agitator):								
Height (closed cover), mm	1350	1480	1720	2000	2670	3050	3635	4260
Height (open cover), mm	1520	1695	1990	2460	3085	3760	4500	-
Width (open cover), mm	1070	1220	1370	1705	2080	2935	3500	2600
Depth, mm	800	860	1080	1250	1350	1766	2200	2600



Creams



Paints



Paste



Ketchup



Polymer



Dressings



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