



Limitech

MULTIFUNCTIONAL PROCESSING EQUIPMENT



LIMITECH PRODUCTS

Product Finder

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Pro: 1, 2, 3 & 4








“Pro” are mixers intended for a process and are therefore equipped with both **mixing wheel** and **agitator**.

The thing separating the four different variations is basically the lid design and the actual size of the vessel. The lid is designed after vacuum, access and cleanability. The variation in size is also connected to what the mixer is intended to do as explained in the following pages.

Sol: 1, 2 & 3

“Sol” are mixers intended for dissolving, and are therefore equipped only with a **mixing wheel**.

The thing separating the three different variations is again the lid design and the actual size of the vessel. The lid is designed after vacuum, access and cleanability.

<div> <div>Limitech mixer</div> <div>Your product</div> </div>	<div>Pro 1</div> 	<div>Pro 2</div> 	<div>Pro 3</div> 	<div>Pro 4</div> 	<div>Sol 1</div> 	<div>Sol 2</div> 	<div>Sol 3</div> 
	300-2000 L.	300-2000 L.	100-1000 L.	10-300 L.	500-6000 L.	50-6000 L.	200-500 L.
	Page 4	Page 5	Page 6	Page 7	Page 8	Page 9	Page 10
Mayonnaise	•			•			
Dressing	•	•		•			
Sauce	•	•		•			
Ketchup	•	•		•			
Dips	•	•		•			
Spreads	•			•			
Processed Cheese				•			
Cream Cheese	•			•			
Recombined Cheese	•			•			
Analogue Cheese	•			•			
Feta	•			•			
Mozzarella	•			•			
Sour Cream	•			•			
Vegetable cream					•		
Rice Desserts	•		•				
Fruit Sauce	•		•				
Jam	•		•	•			
Marmelade	•		•	•			
Mousses	•		•	•			
Hydrocoloids incl. Pectin					•	•	•
Toppings	•		•	•	•	•	•
Pie Filling	•		•	•			
Stews	•		•	•			
Mashed Potatoes	•		•	•			
Marinades	•	•	•	•	•	•	•
Soup	•	•	•	•	•	•	•
Purée	•		•		•	•	•
Bread Rework	•	•	•	•			
Baby Food (non dairy)	•		•	•			

For other products please don't hesitate to contact us, so we can find the perfect solution for you.

Product Configurator

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Equipment	Pro 1	Pro 2	Pro 3	Pro 4	Sol 1	Sol 2	Sol 3
	Page 4	Page 5	Page 6	Page 7	Page 8	Page 9	Page 10
	300-2000 L.	300-2000 L.	100-1000 L.	10-300 L.	500-6000 L.	50-6000 L.	200-500 L.
Mixing Wheel	•	•	•	•	•	•	•
Stator Ring	•	•	•	•	•	•	•
Knife	•	•	•	•			
Agitator	•	•	•	•			
Double Arm Agitator. Scrapers on One Arm	⊙	•	⊙	⊙			
Single Arm Agitator with Scrapers	⊙	⊙	⊙	•			
Multi Agitator	•	⊙	⊙	⊙			
Double Arm Agitator No Scrapers	⊙	⊙	•	⊙			
Frequency Inverter on Agitator	•	•	•	•			
Vortex Breaker					•	•	•
Vacuum System	•	⊙		•	⊙		
Funnels	⊙	⊙		⊙	⊙		
Dimple Jacket	•	⊙	⊙	•	⊙	⊙	⊙
Direct Steam + Insulation	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Indirect Steam + Insulation	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Cooling	•	⊙	⊙	•	⊙	⊙	⊙
Direct/Indirect Steam, Cooling & Insulation	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Spray Balls (CIP ready)	•	•		•	•	•	
Two Speed Motor on Mixer	•	•	•	•	•	•	•
Frequency Inverter on Mixer	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Manuel Control	•	•	•	•	•	•	•
PLC Control	⊙	⊙	⊙	⊙			
Inlet of Water in Lid	⊙	⊙	⊙	⊙	•	•	•
Sight Glass	•	⊙	⊙	•	⊙	⊙	⊙

• = Standard

⊙ = Option

Features on mixer

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The mixer system prepares your production for the future with our unique mixing wheel that can be altered to different processes down the line giving you total flexibility and freedom to make product development with the confidence that Limitech will do the job in the right quality. Our fully tested mixer pro-

gram is your guarantee for high capacity and product quality. All products can be tested in our lab facilities or in your own factory. Our focus is on your ability to make the perfect product with minimum cost.



The Vessel

The vessel is made with the highest attention to hygienic design and cleanability to ensure food safety. The vessel has a dimple jacket for cooling and heating designed for extra demanding environment.

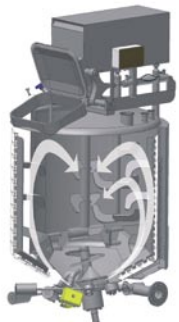


The Mixing Wheel

The High Speed Mixer is mounted in the bottom of the tank in an angle maximizing the mixing effect and allowing the final product to be pumped out from the lowest point of the vessel. When emptying the mixer there is no contact with the mixing unit when turned off, which allows for particles to be emptied out without being destroyed. The mixer operates like a centrifugal pump and pre-homogenises the product to make almost instant emulsions and blends.

The Agitator

The agitator system is designed to gently blend without destroying particles and at the same time efficiently scrape the inside tank wall to ensure maximum heating and cooling transfer into the product. The agitator is equipped with a frequency converter for variable speed control of the motor.



Vacuum

The vacuum system has three functions, one for de-aerating the product, one for avoiding foaming during the process and one for drawing dry or fluent ingredients into the tank under liquid level which makes it a clean, fast and efficient way to add ingredients.

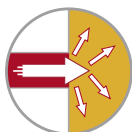
PLC Control

Full PLC system with recipe control to ensure the same product quality in each batch and also to minimize the risk of operator faults.



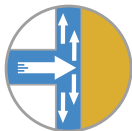
Indirect Heating

Steam is blown into the dimple jacket to heat the product without direct contact with the product. This gives a gentle heating process that is easy to control.



Direct Heating

Steam is injected into the vessel, typically used for ketchup and sauces. It gives a very rapid heating with no risk of burning on wall surfaces. This heating process is typically more than twice as fast as indirect heating.



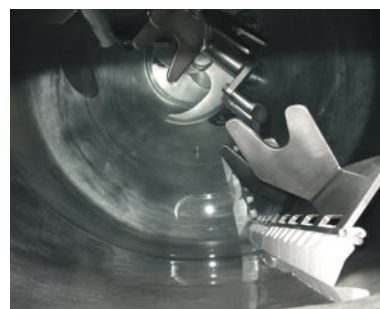
Cooling

The cooling system is cold or ice water in the dimple jacket. This system reduces cooling time rapidly and in combination with our vacuum system you can reduce the cooling time even further. Please ask for more specific information regarding your product.

All mixers can be fitted with different mixing tools that can be changed at all times. This to ensure a multifunctional solution that will serve you for years without running short of options. The range covers functions from fine emulsions with oil droplets down to 1 micron to gentle cooking processes with particles - all in the same vessel. All options are suited for very viscous products.



Pro 1 - 1000L



The Pro 1 is our flag ship and one of the most versatile and efficient food mixers you will find on today's market. It is a multifunctional mixer offering everything needed - incl. maximum flexibility. The use of the mixer in a food production is very wide ranging from dressings to mashed potatoes and handles all viscosities up to 80 % mayonnaise.

Advantages:

1. Multifunctional
2. Short process time
3. Changeable mixing tools

Effective volume in litre: 300, 500, 1000, 1500, 2000

Standard features:

High shear mixing
Effective agitation
Frequency inverter on agitator
Manway hatch
Vacuum
Cooling
CIP Ready
50 mm insulation

Options:

Direct heating
Indirect heating
Frequency inverter on mixer
PLC control
Water inlet on top
Funnels

	300 Liter	500 Liter	1000 Liter	1500 Liter	2000 Liter
Steam direct Kg/hr.	225	300	450	600	750
Steam indirect Kg/hr.	130	200	370	520	650
Mixer motor kW min.	22	37	55	75	75
Agitator motor kW	4-11	4-11	4-11	4-11	4-11
Air (Bar)	6	6	6	6	6
Power approx. kW	30	45	63	84,5	84,5
Amp supply	100	130	200	200	200
Voltage	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz
Weight kg	1100	1350	1700	1850	2050
Vacuum	148 m ³ /4 kW	148 m ³ /4 kW	148 m ³ /4 kW	210 m ³ /5,5 kW	210 m ³ /5,5 kW
Length (mm) *	2360	3080	3220	3550	3960
Width (mm) *	1120	1350	1530	1720	1850
Height (mm)	2040	2440	2880	3250	3300

Unit Specifications: Max vacuum: -950 mbar Gauge, 4 bar jacket pressure

Maximum temperature: 100 degrees Celcius.

* incl. vacuum pump

Pro 2 - 1000L



The Pro 2 is our multifunctional mixer specially designed for food products with limited viscous structure. It is perfect for high volume batches.

The mixer is with a welded lid making it possible to do effective CIP cleaning of the mixer.

Advantages:

1. Multifunctional
2. Short process time
3. Changeable mixing tools

Effective volume in litre: 300, 500, 1000, 1500, 2000

Standard features:

High shear mixing
Effective agitation
Frequency inverter on agitator
Manway hatch
CIP ready

Options:

Vacuum
Direct heating
Indirect heating
Cooling
Frequency inverter on mixer
PLC control
Water inlet on top
Funnels

	300 Liter	500 Liter	1000 Liter	1500 Liter	2000 Liter
Steam direct Kg/hr	225	300	450	600	750
Steam indirect Kg/hr.	130	200	370	520	650
Mixer motor kW min.	22	37	55	75	75
Agitator motor kW	4-11	4-11	4-11	4-11	4-11
Air (Bar)	6	6	6	6	6
Power approx. kW	30	45	63	84,5	84,5
Amp supply	100	130	200	200	200
Voltage	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz
Weight kg	950	1200	1550	1675	1875
Vacuum	148 m ³ /4 kW	148 m ³ /4 kW	148 m ³ /4 kW	210 m ³ /5,5 kW	210 m ³ /5,5 kW
Length (mm)	1690	2420	2560	2880	3100
Width (mm)	1120	1350	1530	1720	1850
Height (mm)	2040	2450	2880	3250	3300

Unit Specifications: Maximum temperature: 100 degrees Celcius.

Pro 3 - 100L



The Pro 3 is specially designed for food production where manual cleaning is preferred. The mixer is with a hinged lid making it very competitive price wise and still highly effective. The mixer is not equipped with vacuum meaning that all ingredients have to be added from the top. It is designed for easy processing of e.g. purées and smoothies.

Advantages:

1. Multifunctional
2. Perfect for smoothies and purées
3. Changeable mixing tools

Effective volume in litre: 100, 200, 300, 500, 1000

Standard features:

High shear mixing
Effective agitation
Frequency inverter on agitator
Hinged Lid

Options:

Direct heating
Indirect heating
Cooling
Frequency inverter on mixer
Water inlet on top

	100 Liter	200 Liter	300 Liter	500 Liter ø190	500 Liter ø290	1000 Liter
Steam direct Kg/hr.	150	150	225	300	300	450
Steam indirect Kg/hr.	57	100	130	200	200	370
Mixer motor kW min.	22	22	22	22	55	55
Agitator motor kW	4-11	4-11	4-11	4-11	4-11	4-11
Air (Bar)	6	6	6	6	6	6
Power approx.	28	28	30	33	66	66
Amp supply	100	100	100	130	200	200
Voltage	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz
Weight kg	525	700	850	1125	1175	1450
Length (mm)	1420	1690	1690	2420	2420	2560
Width (mm)	840	1120	1120	1350	1350	1530
Height (mm)	1740	1890	2040	2450	2450	2880

Unit Specifications: Maximum temperature: 100 degrees Celcius.

Pro 4 - 100L



The Pro 4, another one of our flag ships, is one of the most versatile and efficient food mixers you will find on today's market. It is a multifunctional mixer with maximum flexibility and is perfect for small batch sizes.

The use of the mixer in food production is very wide ranging from up to 80 % mayonnaise, mashed potatoes to processed cheese.

Advantages:

1. Fully open lid
2. Multifunctional
3. Changeable mixing tools

Effective volume in litre: 10, 20, 40, 60, 100, 150, 300

Standard features:

High shear mixing
Effective agitation
Frequency inverter on agitator
Liftable lid
Vacuum
Cooling
CIP Ready

Options:

Direct heating
Indirect heating
Frequency inverter on mixer
PLC control
Water inlet on top
Funnels

Pro 4 - 10L



	10 Liter	20 Liter	40 Liter	60 Liter	100 Liter	150 Liter	300 Liter
Steam direct Kg/hr.	75	75	75	75	150	150	225
Steam indirect Kg/hr.	13	17	28	38	57	76	130
Mixer Motor kW min.	4	4	4	4	22	22	22
Agitator motor kW	0,55-1,1	0,55-1,1	0,55-1,1	1,1-3,0	2,2-5,5	2,2-5,5	2,2-5,5
Air (Bar)	6	6	6	6	6	6	6
Power approx.	5,3	5,3	5,3	9,2	28,5	28,5	28,5
Amp supply	12	12	12	18	55	57	61
Voltage	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz
Weight Kg.	750	750	750	1050	1275	1325	1400
Vacuum	75m ³ /0,75kW	75m ³ /0,75kW	75m ³ /0,75kW	75m ³ /3kW	110m ³ /3kW	110m ³ /3kW	110m ³ /3kW
Length (mm)	1560	1560	1560	1680	2190	2310	3110
Width (mm)	1340	1340	1270	1370	1720	1790	2150
Height (mm)	1980	1980	1890	2040	2160	2160	3000
Open Height (mm)	2380	2380	2290	2450	2560	2560	3700

Unit Specifications: Max vacuum: -950 mbar Gauge, 4 bar jacket pressure, Maximum temperature: 100 degrees Celcius.

* incl vacuum pump

Sol 1 - 5000L



The Sol 1 is specially designed for dissolving powders in large quantities of liquid matter. The mixer is equipped with a mixing wheel in the bottom where dry powder is sucked in directly via vacuum, making it possible to reach uniform powder blends within minutes.

The Sol 1 is the ideal choice for ice cream mix and other milk solutions.

Advantages:

1. Short process time
2. Vacuum dissolver
3. De-aeration

Effective volume in litre: 500, 1000, 1500, 2000, 3000, 4000, 5000, 6000

Standard features:

High shear mixing
Water inlet on top
Manway hatch
Vacuum
CIP

Options:

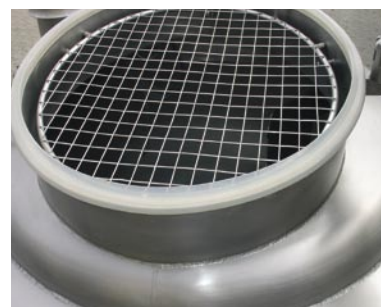
Direct heating
Indirect heating
Cooling
Frequency inverter on mixer
Funnels

	500 liter	1000 Liter	1500 Liter	2000 Liter	3000 Liter	4000 Liter	5000 Liter	6000 Liter
Steam direct Kg/hr.	300	450	600	750	1050	1275	1500	1800
Steam indirect Kg/hr.	200	370	520	650	871	1081	1265	1488
Mixer motor kW min.	22	30	37	45	55	75	75	90
Air (Bar)	6	6	6	6	6	6	6	6
Power approx.	26	34	41	50,5	60,5	82,5	82,5	97,5
Amp supply	63	85	100	120	150	200	200	240
Voltage	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz
Weight kg	900	1200	1500	1680	1800	2100	2380	2500
Vacuum	148 m ³ /4 kW	148 m ³ /4 kW	210 m ³ /5,5 kW	210 m ³ /5,5 kW	210 m ³ /5,5 kW	275 m ³ /7,5 kW	275 m ³ /7,5 kW	275 m ³ /7,5 kW
Length (mm) *	2950	3300	3680	4000	4050	4100	4120	4150
Width (mm) *	1230	1550	1700	1750	1850	1950	2080	2150
Height (mm)	2070	2600	2880	3150	3450	3600	3830	4350

Unit Specifications: Maximum temperature: 100 degrees Celcius.

* incl. vacuum pump

Sol 1 - 500L



The Sol 2 is specially designed for dissolving powders fast without “fish eyes” or lumps. The powders are added from the top. This rapid dissolving unit is typically used for pre-mixing as it dissolves pectin in 3 minutes and in double quantities. The mixer is equipped with a welded lid with a man-way hatch making it suitable for CIP cleaning.

Advantages:

1. Short process time
2. Dissolves double concentration of pectine compared to conventional mixers
3. CIP

Effective volume in litre: 50, 100, 150, 200, 250, 300, 400, 500, 1000, 1500, 2000, 3000, 4000, 5000, 6000

Standard features:

High shear mixing
Water inlet on top
Manway hatch
CIP ready

Options:

Direct heating
Indirect heating (60 degrees)
Cooling
Frequency inverter on mixer

	50 l	100 l.	150 l.	200 l. Ø190	250 l.	300 l.	400 l.	500 l. Ø290	1000 l.	1500 l.	2000 l.	3000 l.	4000 l.	5000 l.	6000 l.
Steam direct kg/h	75	150	150	150	225	225	225	300	450	600	750	1050	1275	1500	1800
Steam indirect kg/h	33	57	76	90	110	130	165	200	370	520	650	871	1081	1265	1488
Mixer motor kW min.	4	4	11	15	15	15	18,5	22	30	37	45	55	55	75	75
Air (Bar)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Amp supply	10	10	27	40	40	40	50	63	75	90	110	135	135	185	185
Voltage	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz	380-415V/ 3ph 50Hz
Weight kg	180	250	325	400	450	525	650	750	1100	1300	1565	1690	1870	2150	2275
Length (mm) *	1200	1400	1400	1680	1680	1680	1850	1850	2250	2380	2950	3000	3050	3100	3150
Width (mm) *	730	750	750	950	950	950	1220	1220	1550	1700	1750	1850	1950	2080	2150
Height (mm)	1200	1200	1350	1350	1500	1630	1800	2070	2600	2880	3150	3450	3600	3800	4350

Unit Specifications: Maximum temperature: 100 degrees Celcius.

* incl. vacuum pump

Sol 3 - 250L



The Sol 3 is specially designed for dissolving powders fast without “fish eyes” or lumps. The powders are added from the top. This mixer is typically used for pre-mixing. Suitable for production where manually cleaning is preferred. Like the Sol 2 this mixer dissolves pectin in 3 minutes and in double quantities.

Advantages:

1. Short process time
2. Dissolves double concentration of pectine compared to conventional mixers
3. Changeable mixing tools

Effective volume in litre: 200, 250, 300, 400, 500

Standard features:

High shear mixing
Water inlet on top
Hinged lid

Options:

Direct heating
Indirect heating (60 degrees)
Cooling
Frequency inverter on mixer

	200 Liter Ø190	250 Liter	300 Liter	400 Liter	500 Liter ø190	500 Liter ø290
Steam direct Kg/hr.	150	225	225	225	300	300
Steam indirect Kg/hr.	90	110	130	165	200	200
Mixer motor kW min.	15	15	15	18,5	22	30
Air (Bar) *	6	6	6	6	6	6
Amp supply	40	40	40	50	63	75
Voltage	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz	380-415V/3ph/50Hz
Weight kg	375	425	475	550	600	700
Lenght (mm)	1520	1580	1680	1680	1690	1690
Width (mm)	870	960	1000	1000	1000	1000
Filling Height (mm)	780	880	980	1130	1190	1190

* Only needed in combintaion with air actuators.

Unit Specifications: Maximum temperature: 100 degrees Celcius.

The total height is +500 mm on the filling height.

Conical Buffer Tanks



Fields of Application

The buffer tank is used for processing pumpable products in the dairy- and food industry where hygienic and functional design is of great importance.

The conical shape and effective selfadjusting scraper on the stirring device assures that even highly viscous products are transported to the outlet with minimal waste. Furthermore, the conical tank design offers a large surface, resulting in fast de-aeration of the product. The buffer tank is also perfect for cooling.

Advantages

- Can be used as a buffer tank and process tank
- Can be used in both continuous and batch production
- Delivered with purpose adapted stirring device
- Can be used as a cooling or heating tank
- Hygienic and functional design
- Assures optimal stirring, mixing and blending of ingredients
- Easy and quick to empty
- Fast and hygienic cleaning
- Efficient agitation and scraping

Standard Features

- Stainless steel AISI 316 and AISI 304
- Inside surface treatment 2B and smooth weldings grain 180.
- Outside surface 2B or polished

Tank sizes in litres:

50, 150, 250, 500, 1000 ,1500, 2000, 3000, 4000

Optional Design Features

- Can be delivered with thermo jacket
- Optimal de-aeration possibilities

Depending on your needs and special demands the buffer tank is dimensioned and constructed to fit an existing or new installation.

Ultra High Temperature Treatment (UHT)



Fields of Application

Designed for the Dairy and Food Industries where high temperature treatment is needed to preserve the products. These units are designed to heat the products to a high temperature.

Such as:

- Processed cheese
- Dairy desserts
- Pet-food
- Chocolate

Advantages

The Process:

- Quick effective heating and cooling
- Short holding time
- Preserve flavour
- Kills: bacteria, virus, yeasts, moulds and bacteria phages.
- Longer shelf life of the product

The UNIT

- Double injector makes continuous production possible
- A wide variety of application possibilities
- The plant can be adjusted for an existing operation if required
- Easy to operate
- Prepared for easy and hygienic cleaning

Standard Features

- Stainless steel AISI 316 and 304
- Inside surface treatment 2B and smooth weldings grain 180.
- Outside surface 2B or polished
- Conical flash-tank
- Adjustable feet
- Pneumatic pressure control
- Easy to operate control box
- Integrated CIP-system



Fields of Application

The batch blender is versatile and specifically designed for gentle mixing and blending of food products and has the facility for:

Heating (Indirect and direct), cooling, chilling, blending and mixing of products like:

- Jam
- Marmalade
- Potato salad
- Fruit topping
- Sauce
- Cole slaw

Advantages

- Solid construction
- Fully open lid
- Hygienic design
- Gentle blade agitator
- Continuous production, while using more than one

Standard Features

- Safety wire
- Stainless steel AISI 316 and 304
- Pneumatic lifting of lid
- Electrical agitator drive
- Easy access to agitator seals
- Stainless steel cover over gear motor

Tank sizes in litres:

50, 500, 1000 ,1500, 2000, 3000, 4000