



**Your Reliable
Partner for
Total Process
Solution in**

**Mixing
Dissolution
Homogenization
Emulsification**

*Damanizer
VMIX
Dynamixer Processor
USmix
Emulder
High Emulder
Homogenizer*



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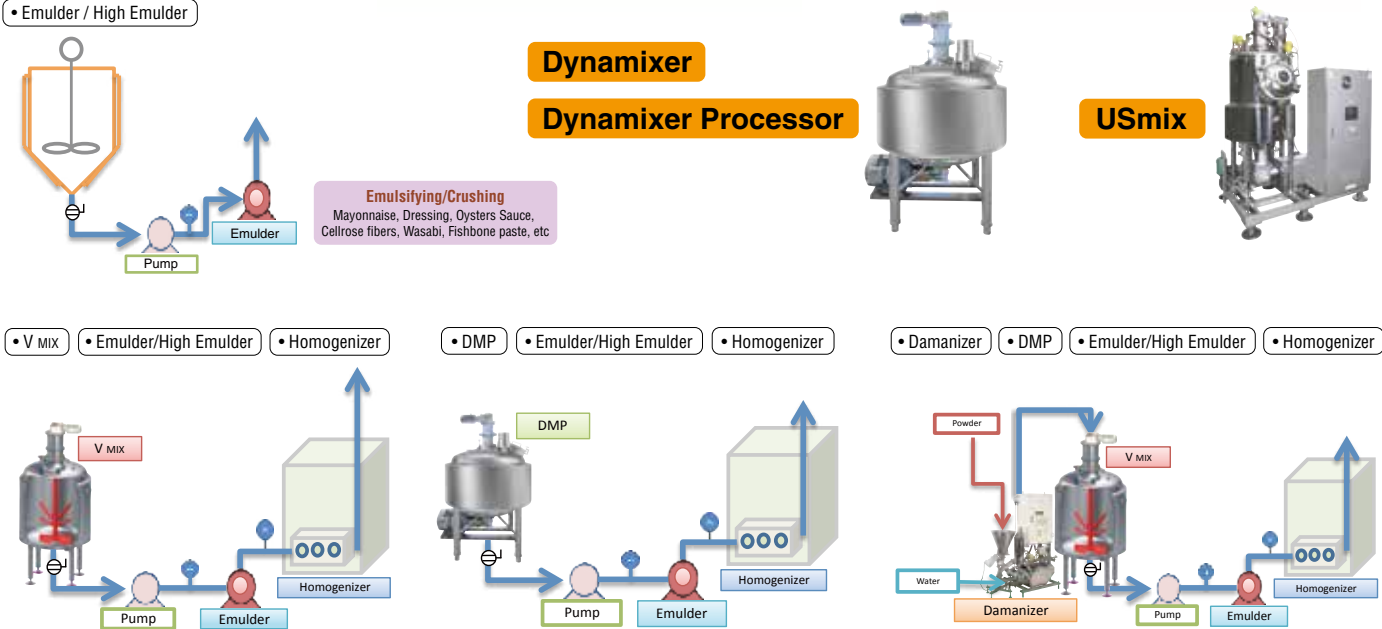
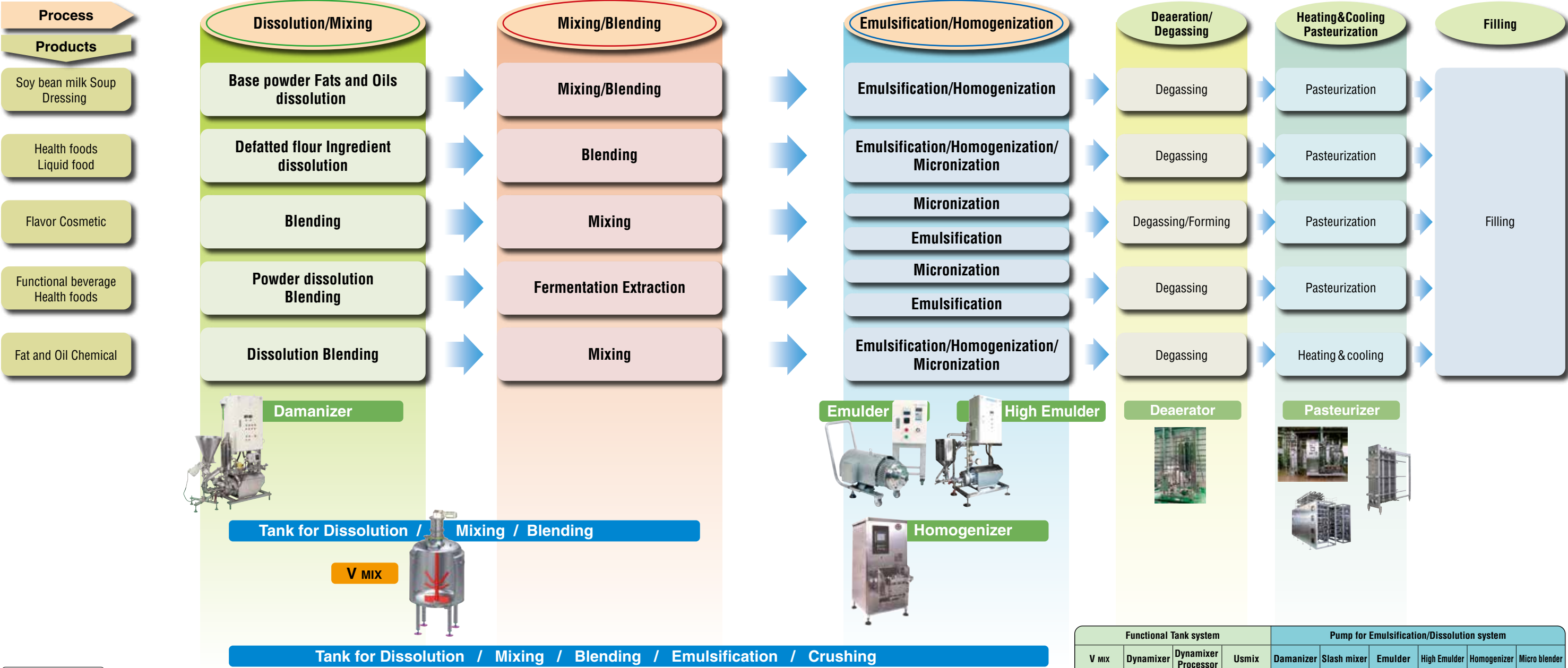
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IZUMI FOOD MACHINERY CO., LTD

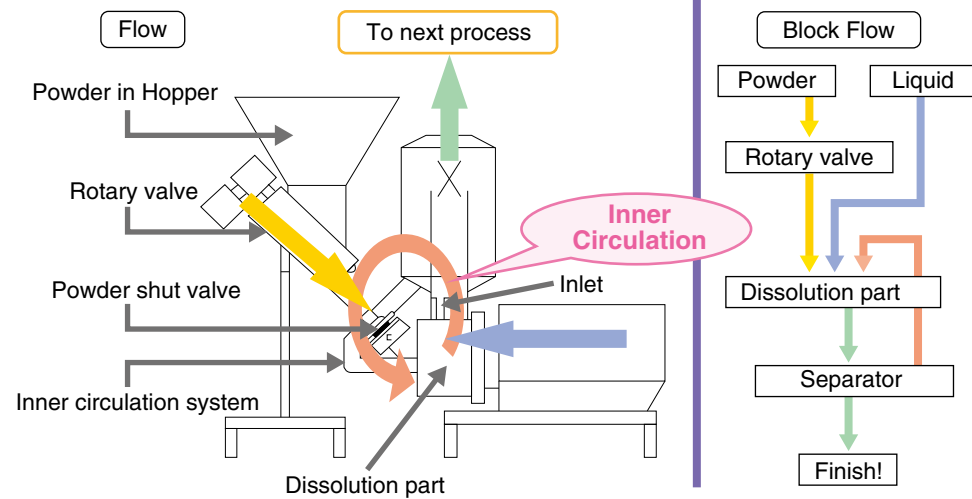
Mixing Dissolving Dispersing Emulsifying Homogenizing - A Total Solution Package - I F M



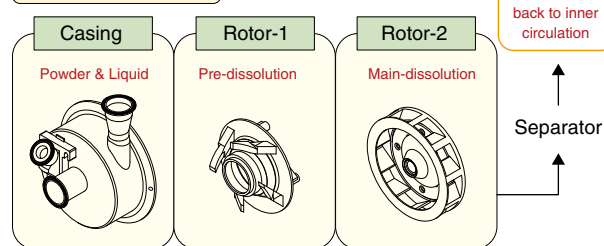
Functional Tank system					Pump for Emulsification/Dissolution system					
	V mix	Dynamixer	Dynamixer Processor	Usmix	Damanizer	Slash mixer	Emulder	High Emulder	Homogenizer	Micro blender
Mixing	Paste Mixing	○	○	○		○				
	Mixing for liquid with solid	◎		◎		○				
	Mixing for liquid with high viscosity	○	△	○		◎				
	Gas-liquid mixing/Overrun									◎
	Mixing without shearing	◎		◎						
Crushing	Crushing for frozen cheese block		◎	△						
	Crushing for vegetables		◎	◎						
	Micronization for vegetables		△	△				○	○	
Dissolution	High speed powder dissolution with shearing		◎	◎	◎					
	Powder dissolution without shearing	◎			○					
	Self-priming capability for powder				◎					
Emulsification	Preliminary emulsification	△	○	○	◎	○				
	Finishing emulsification for dressing			◎			◎	○	◎	
	Finishing emulsification for additive			◎			◎	○	◎	
	Emulsification for milk								◎	
Transporting capacity for liquid						○		◎	◎	
Available for set up exist product line with easy						○	◎	◎		◎
Corresponding to the production of a variety of products in small amounts					◎	◎	◎	◎	○	○

Damanizer

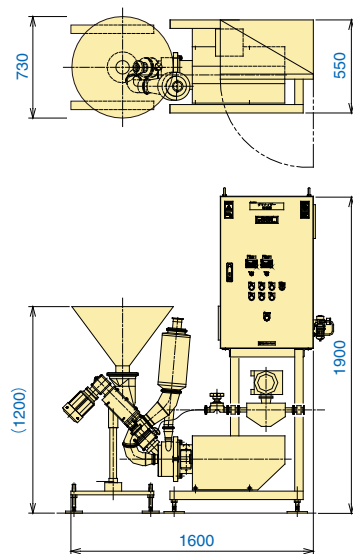
Powder Dispersion and Dissolution



Dissolution part detail



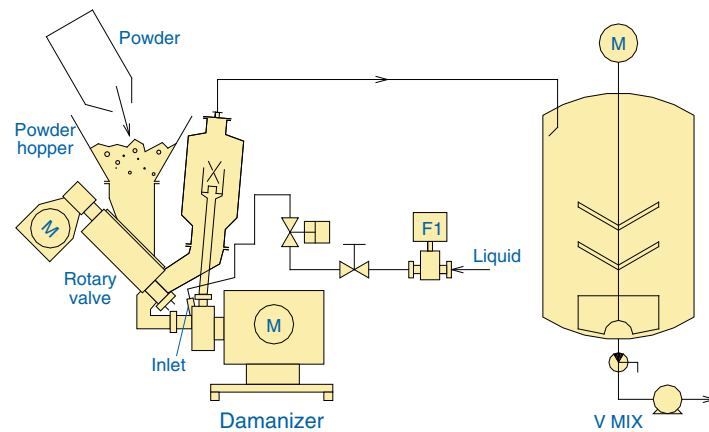
Dissolution system by 2 steps of rotor



Field
Beverage, Dairy, Seasoning, Brewing, Confectionery, Bakery, Pharmaceutical, Chemical, etc

Powder
Non-fat powder, CMC, Case in Na, Soybean powder, Sugar, Coloring powder, Thickener, Gelling Agent, etc

Max for 800.000mPa·s experience for Toothpaste



Damanizer		
Model	SPVM 22-1815	SUS304
Power	11kw (Inverter)	
Powder suction speed	25kg/min	
Solution discharge Qty	3000kg/hr (It depends on products & mixture)	
Discharge pressure	+0.02MPa (2m)	Carbide/Carbon O ring NBR
Shaft sealing	Mechanical seal	
Finishing	Inner surface : #320 buff polish	

Powder suction hopper		
Size	φ400 x 350H (To be discussed)	SUS304
Finishing	Inner/Outer surface : #320 buff polish/acid cleaning	

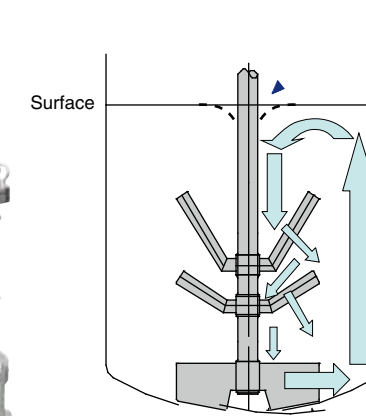
Inner circulation tube		
Shape	Single cylindrical	SUS304/O ring NBR
Finishing	Inner/Outer surface : #320 buff polish/acid cleaning	

• Experience

Type of industry	Powder	Powder Discharge kg/hr	Liquid Discharge kg/hr	Power(kW)
Chemistry	Iodine	420	1800	11
Cook	Soybean flour	600	3000	11
Chemistry	CMC	15	1500	11
Chemistry	Detergent	1500	1500	11
Brewing	Rice flour	3000	4500	11
Foods	Casein sodium	660	2000	11
Beverage	CMC	189	7920	11
Pharmaceutical	PVA mixed powder	108	1100	11
Confectionary	Gelatin, jelly	956	3000	11
Beverage	Pectin	114	3000	11
Bevarage	Gelling agent	150	2100	11
Sugar	Dextrin	1500	1500	11
Pharmaceutical	Soybean flour	1170	4800	11
Confectionary	Gelatin, jelly	956	3000	11

V MIX

All Purpose Versatile Mixer



Efficient mixing by the arm blades

Strong discharge from the Bottom blade

→ Available for high viscosity products

• Characteristics

- Changeable Volume ; 20%~120%
- Wide range of Viscosity ; 1~around 50,000mPa·s
- Shorter time to mixing ; Half to Paddle Blade
- Less involvement of air with slow rotation
- Uniform mixing for slurry

• Comparison at varying quantity mixing

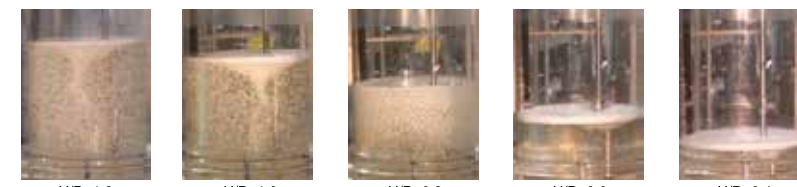
(V MIX vs Standard Double Paddle Blade, H=Liquid depth, D=Inner diameter of tank)

Syrup diluted solution (Viscosity 150mPa·s), Pv=0.3kW/m3, Resin chips (Specific gravity 0.95, 3wt%)

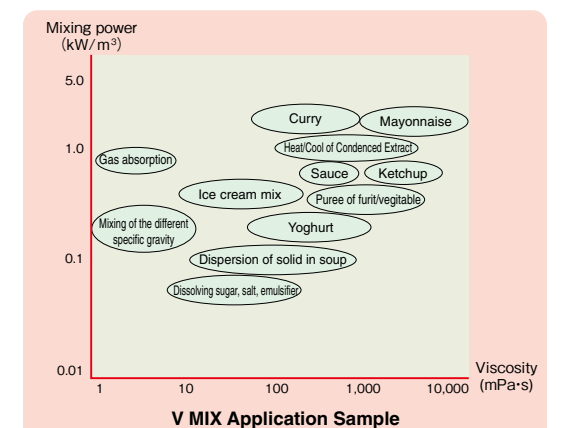
V MIX



Standard Double Paddle Blade



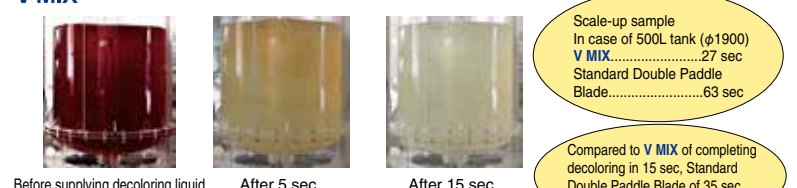
Liquid quantity & speed Reducing



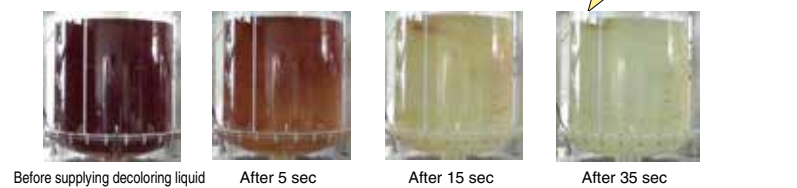
• Mixing time comparison

(V MIX vs Standard Double Paddle Blade)

V MIX



Standard Double Paddle Blade



CMC solution liquid (Viscosity 500mPa·s), Pv=0.3kW/m3, Iodine decolorization reaction

• Specifications

Capacity(L)	Inner Diam.(mm)	Motor power(kW)	Total height(mm)
100	500	0.2	2000
250	700	0.2	2550
1000	1300	0.55	2710
2500	1550	1.1	3950
4000	1700	2.2	4900
5000	1900	2.2	5150
10000	2400	5.5	5950

In case mixing liquid with 1000mPa·s viscosity

Dynamixer & Dynamixer Processor / USmix

Dynamixer Dynamixer Processor

All in one solution in one tank. Intensive Shear, Disperse, Dissolute, and Mixing with optional thermal process - heating and cooling.

- Crushing and dissolving 20kg of frozen cheese block



Before operation



- Discharger for crushing small solids and dissolving powder



Chopper Blade work on (875rpm)



- Chopper Blade for crushing bigger solids



After vanishing big solids, scraper work on



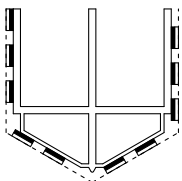
- Double cup Discharger for dissolving smaller solids and pastes



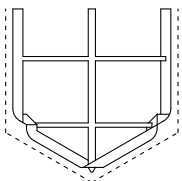
After Chopper Blade is gone 1750rpm dissolving



inside

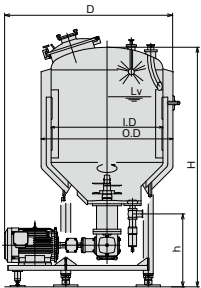


Scraper Combination image



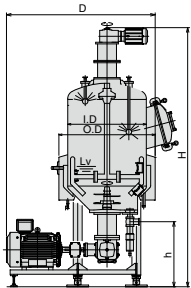
Bottom & Side Sweep image

Dynamixer Line-up

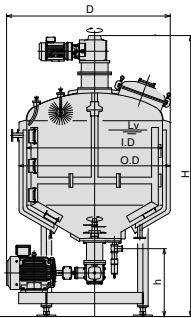


Lv	I.D.	O.D.	D	H	Rotor		
					Rotor speed of rotation (rpm)	Power	
(L)	(mm)	(mm)	(mm)	(mm)		Single cup Discharger (kW)	Double cup or Chopper Blade (kW)
100	700	906	1420	1650	1750	18.5	22
200	900	1106	1520	1800	1750	18.5	22
350	1150	1356	1645	1930	1750	18.5	22
500	1150	1356	1645	2080	1750	18.5	22
1000	1150	1356	1735	2550	1750	30	30
1500	1350	1556	1835	2750	1750	30	30
2000	1550	1756	2050	2950	1750	45	55
3000	1800	2006	2175	3220	1750	45	55

Dynamixer Processor Line-up



100L~350L Scale



500L~5000L Scale

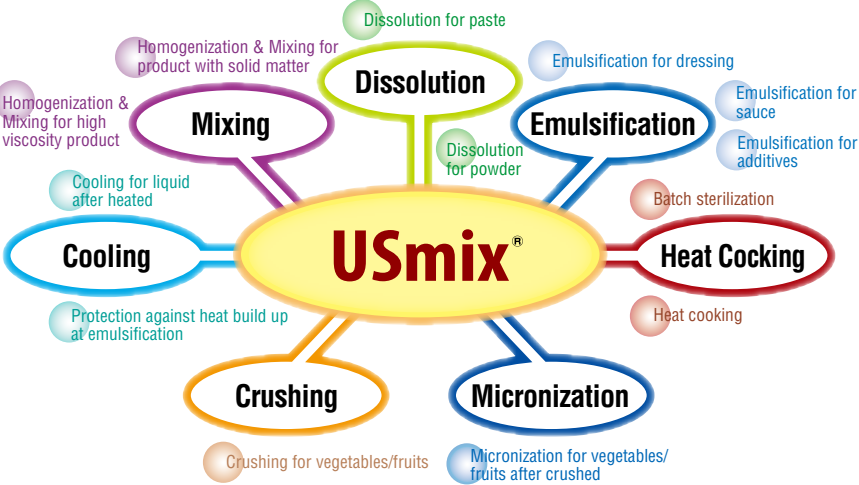
Lv	I.D.	O.D.	Rotor		Scraping blade		D	H	h
			Rotor speed of rotation (rpm)	Power	Motor speed of rotation (rpm)	Power			
(L)	(mm)	(mm)		Single cup Discharger (kW)		(kW)			
100	700	906	1750	18.5	35	1.5	1420	2800	800
200	900	1106	1750	18.5	35	1.5	1330	2350	800
350	1050	1256	1750	18.5	35	1.5	1400	2400	800
500	1200	1400	1750	22	30	2.2	1550	2400	800
1000	1250	1450	1750	30	30	2.2	1600	2800	800
1500	1250	1450	1750	37	37	2.2	1850	3140	800
2000	1550	1750	1750	45	55	2.2	2000	3270	900
3000	1800	2000	1750	45	55	2.2	2130	3450	900
4000	1800	2000	1750	45	55	11	2130	3840	900
5000	2100	2300	1750	45	55	18	2280	3750	900

USmix



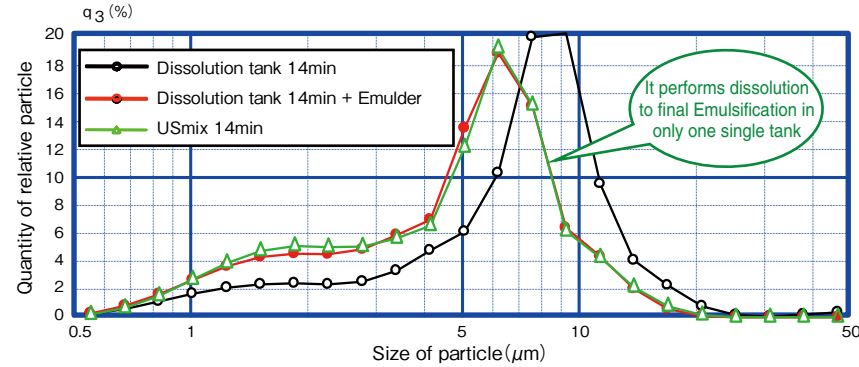
USmix test unit

Applications

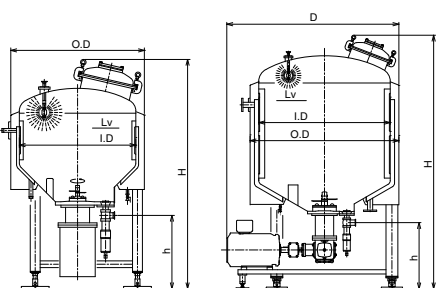


Example

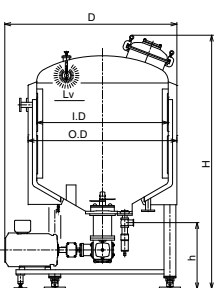
- Dressing: Xanthangum+Egg Yolk+Soy bean
- Capacity: 375L (Dissolution tank & USmix)



USmix Bottom Agitating Device Line-up



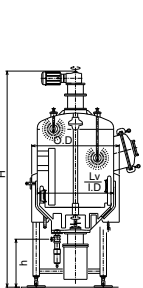
Under 1000L Scale



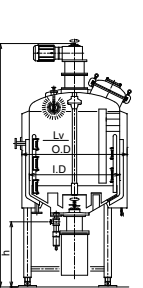
Over 1500L Scale

Lv	I.D.	O.D.	D	h	H	Bottom agitating device	
						Motor speed of rotation (rpm)	Power (kW)
(L)	(mm)	(mm)	(mm)	(mm)	(mm)		
100	700	906	—	750	1815	3500	11
200	900	1106	—	750	1955	3500	11
350	1050	1256	—	750	2110	3500	11
500	1250	1456	—	950	2275	3500	22
1000	1250	1456	—	950	2675	3500	22
1500	1400	1606	1955	780	2800	1750	45
2000	1550	1756	2030	780	2870	1750	45
3000	1800	2006	2155	780	3095	1750	45

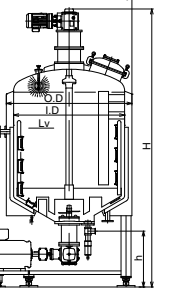
USmix Bottom and Upper Agitating Device Line-up



Under 350L Scale



500~Under 1000L Scale

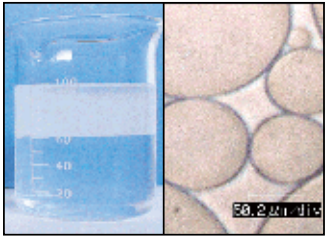


Over 1500L scale

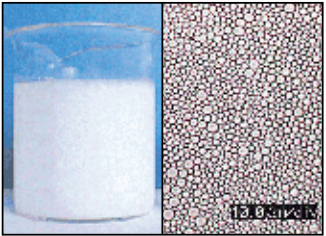
Lv	I.D.	O.D.	D	h	H	Bottom agitating device		Upper agitating device	
						Motor speed of rotation (rpm)	Power (kW)	Gear motor speed of rotation (rpm)	Power (kW)
(L)	(mm)	(mm)	(mm)	(mm)	(mm)				
100	700	906	—	750	2900	3500	11	58	1.5
200	900	1106	—	750	2885	3500	11	44	1.5
350	1050	1256	—	750	2975	3500	11	35	1.5
500	1250	1456	—	950	3030	3500	22	29	2.2
1000	1250	1456	—	950	3415	3500	22	29	2.2
1500	1400	1606	1955	780	3713	1750	45	29	3.7
2000	1550	1756	2030	780	3880	1750	45	25	3.7
3000	1800	2006	2155	780	4015	1750	45	22	5.5

Emulder / High Emulder / Homogenizer

Emulder



Original oil liquid



One pass treating at 3600rpm

Foods/Beverages

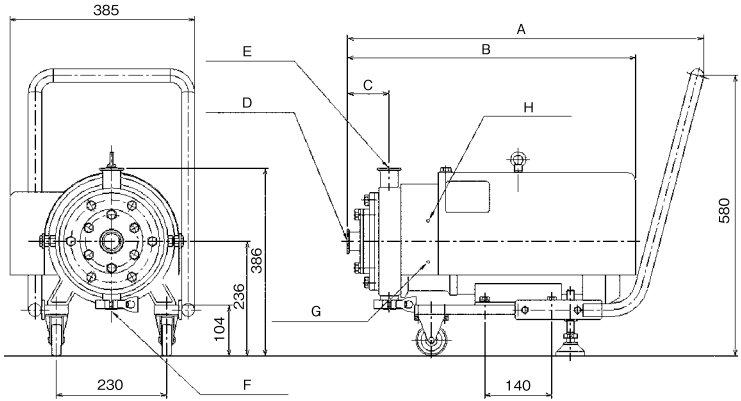
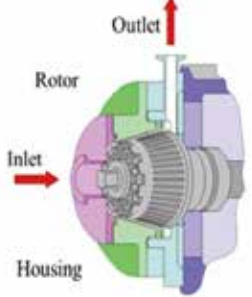
Diary Products Milk / Cream / Ice Cream / Coffee
Fat Products Mayonnaise / Butter / Margarine
Beverages Fruit Juice / Green Vegetable Juice
Seasonings Ketchup / Dressings / Sauces / Spice
Confectionaries Chocolate / Flour Paste
Others Liquid Food

Chemical

Ink / Pigment / Paint / Dye stuff / Developer

Others

Pharmaceuticals / Cosmetic

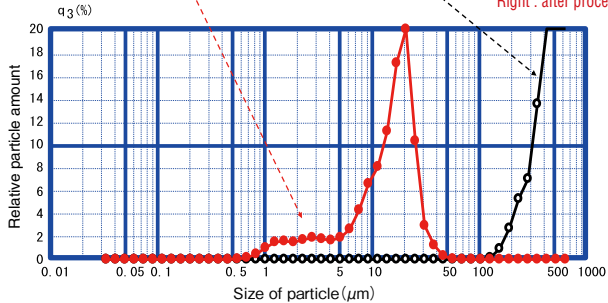


Model No.	Depth		Inlet to Outlet	Process liquid		Drain	Coolant		Motor (kg)	Weight (kg)
	A	B		D	E		Inlet to	Outlet		
EB-06	730	600	87	1.5S	1.5S	1.5S	Air tube ϕ 6		2.2	80
EB-08									3.7	85
EB-10	740	607	89	2S	2S	1S			7.5	95

Model No.	Discharge(L/H) (depend on product)	Maximum(rpm)	Standard viscosity (mPa-s)	Size of solid material(mm)
EB-0603	100-500	3600	1-100,000 and more	below 3mm
EB-0805	200-1000			
EB-1010	500-2000			

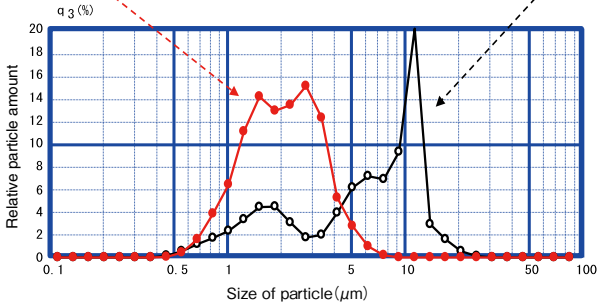
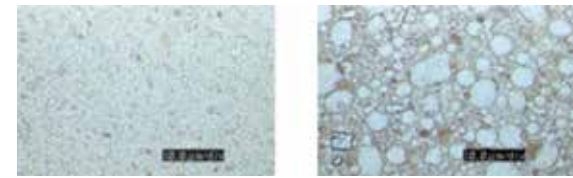
Emulsification

To mix the materials which are difficult to mix each other like oily material and water. In the process, generally one material makes finer structure and runs into another.
(e.g. Fat for pre-cooked foods)



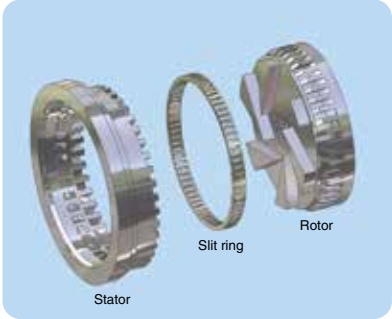
Homogenization

- Particle size is to be distributed uniformly.
- Particle is destroyed and made smaller size to apply outer force, partially.
(e.g. Ice Cream Mix)

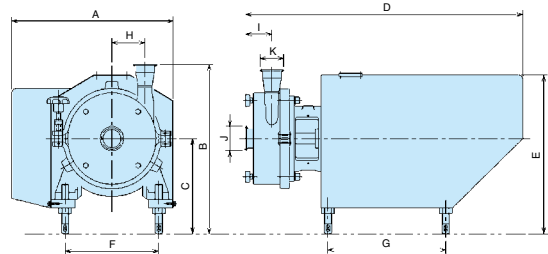


Specifications of Mixture (rate of mixture)
Chocolate (50°C) : Ice Cream Mix (5°C / Fatt content approx. 15%)=2 : 3

High Emulder



High Emulder is a high efficient and hygienic emulsifier with pumping capability, which gives strong shear force caused by 30-50 m/sec running speed using the unique shape of shearing blade on the rotor and stator.



Model No.	Weight	Power	A	B	C	D	E	F	G	H	I	J	K
SPVE22-1405	60kg	3.7kW	426	340	200	768	350	215	520	74	75	IDF38	
SPVE22-1815	110kg	11kW	468	527	332	944	530	290	610	90	71	IDF50	

Crushing

- Destroy the solids/fibers into fine structure (powder). Smash is a kind of destruction.

e.g. Oyster and Water



raw Material (1 pc. Approx. 5cm)
e.g. Fibers in Apple meat

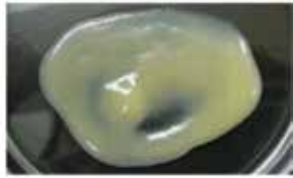


after one time processed by High Emulder

e.g. Fibers in Apple

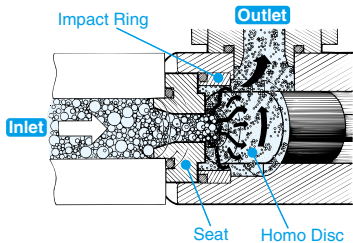
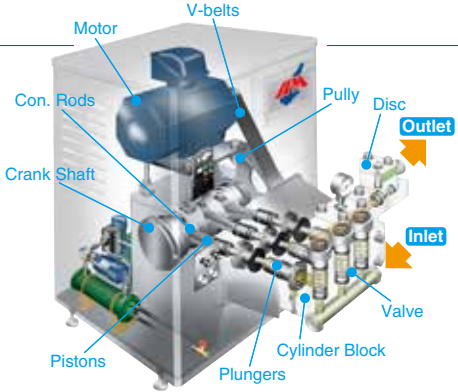


raw Material



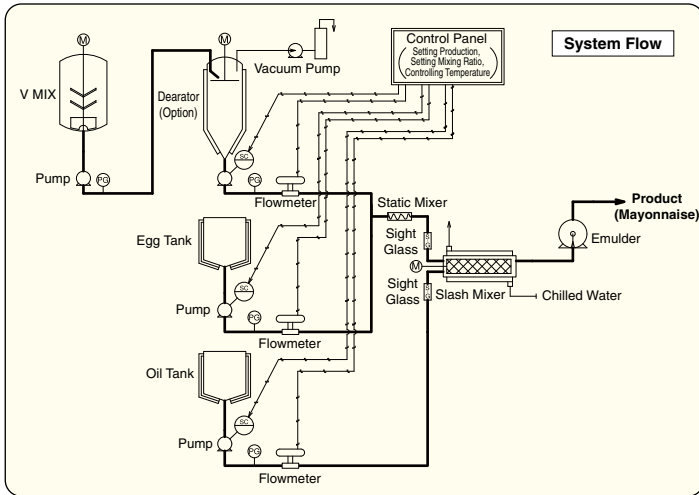
after 2 time processed by High Emulder

Homogenizer



Continuous Emulsification system

Continuous Mayonnaise Manufacturing Equipment



Techno center for your solution and development !!



●Laboratory

- Available Measuring instruments and Experimental equipments
- Viscometer • Microscope
 - PHmeter • Microscope
 - Particle size distributionmeasuring device
 - Centrifugal separator
 - Moisture meter • Silinometer
 - Rotary evaporator • DO meter
 - Autoclave
 - Electric conductivity meter
 - Superheated steam generator
 - Colorimeter • Brixmeter



● Particle size distribution measuring device

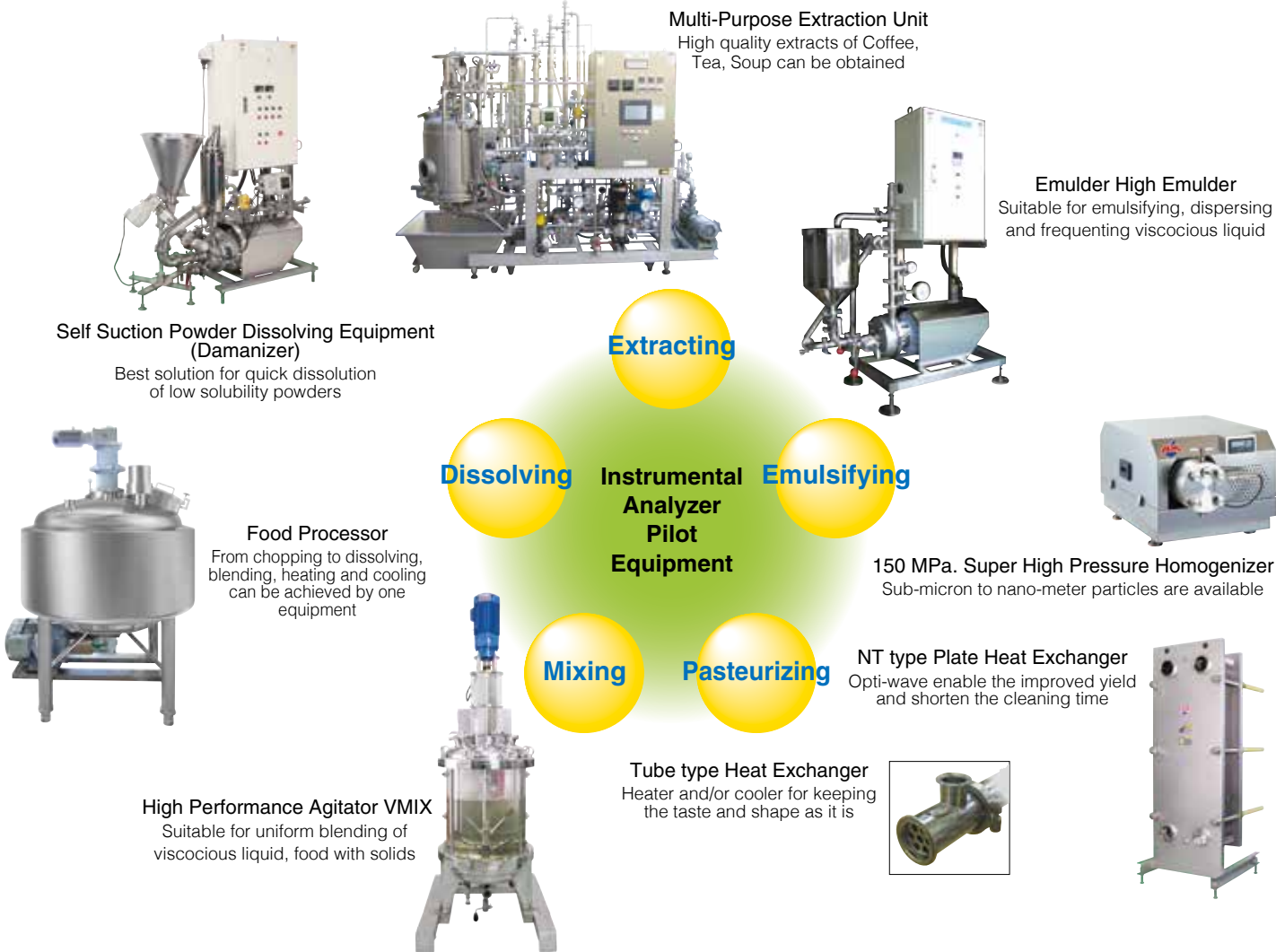


● Microscope



● Viscometer

In our Techno-center, fundamental research-works, development of new equipments and processing-plants have been executing with full of power.
Upon client's request, Techno-center prepares the equipments for experimental use and tests them in shortest leading time.



You can utilize our techno-center through communication to fulfil exactly what you require.



We are available "Rental services at Indonesia" for the test machines "Extractor" "Homogenizer".
Please feel free to ask Jakarta Representative office.
The kind fo test machine will plan to expand in the future.