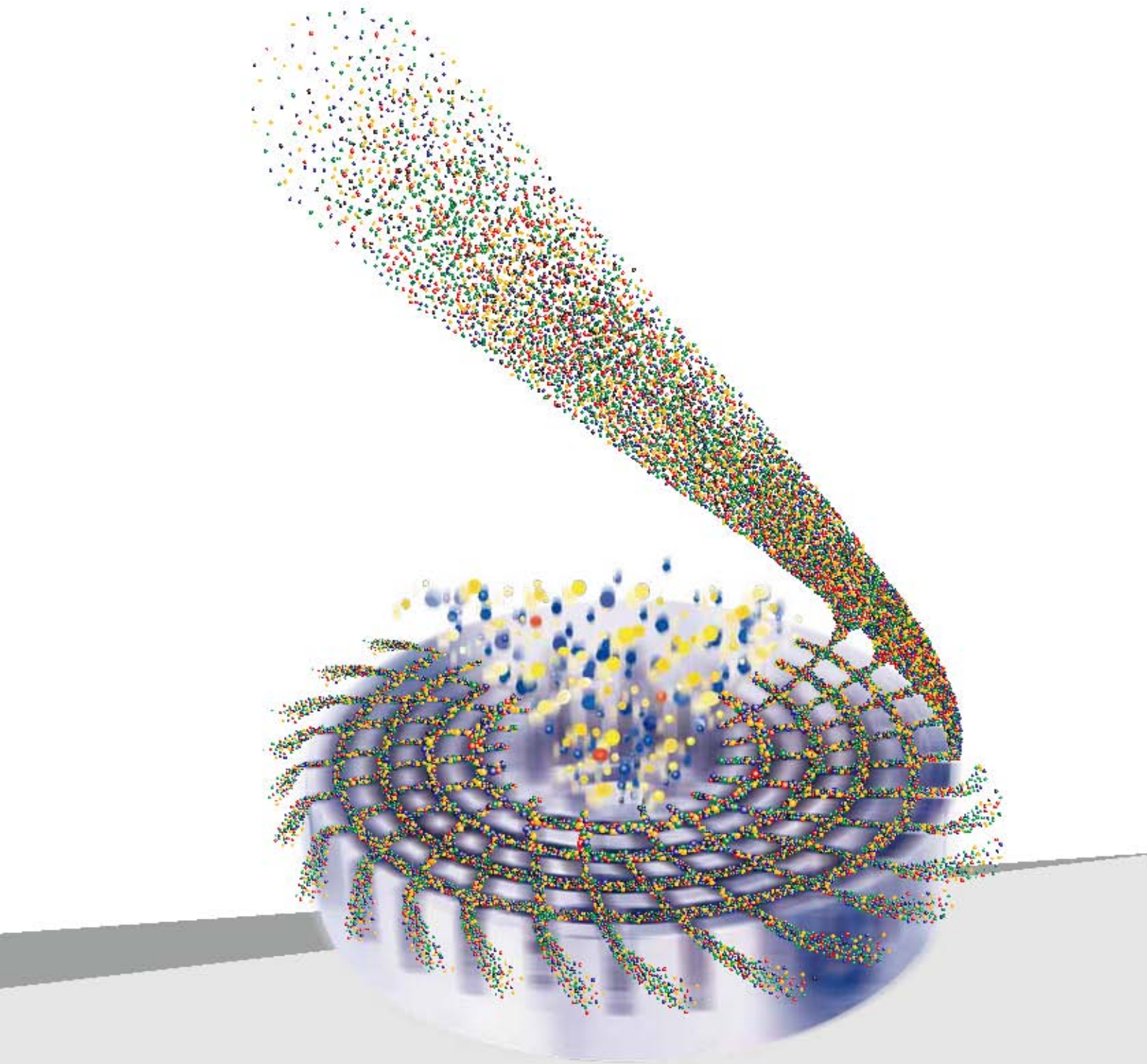
FLUKO.

Fine Fluko



Product Brochure

Dispersing / Emulsifying / Homogenizing / Mixing

Contents

Laboratory Equipment P3-36

FCH Magnetic Stirrer P3–4
R10 Air Drive Mixer P5
G30 Eurostar Mixer P6
R30A, R50A, i70 Electric Stirrer P7–8
Optional Agitators P9–12
FM200, FM300 High Shear Dispersing Emulsifier P13–14
FM20–D, FM30–D High Shear Dispersing Emulsifier P15–16
F6/10, F8 Superfine Homogenizer P17–18
FA25, FA25–D High Shear Dispersing Emulsifier P19
FAR25 High Shear Dispersing Emulsifier P20
Optional Dispersing Agitator for FA25 Series P21–22
FA30, FA40 High Shear Dispersing Emulsifier P23–24
FA60, FA90 High Shear Dispersing Emulsifier P25–28
MS10, MS20 High Shear Dispersing Emulsifier P29
F22Z, F30Z, F40Z High Shear Dispersing Emulsifier P30
FDC1/40, FDC1/60 High Shear Dispersing Emulsifier P31
FDC3/40, FDC3/60 High Shear Dispersing Emulsifier P32
Fisco Reactor System (Lab Scale) P33–36

Industrial Equipment P37-70

High Shear Dispersing Emulsifier P37-54

High Shear Dispersing Emulsifier P37
FA&FAB&FAS P38–40
FM&FMB&FMS P41–42
Inline High Shear Dispersing Emulsifier P43–44
FDC&FDX P45–48
FAE&FME P49–50
FDE P51–52
FDH&FDH–T P53–54

Jetmixers Dispersing Mixer P55-58

Jetmixers Dispersing Mixer P55
FJB&FJB–X P56
FJS&FJS–X P57
FJE&FJE–X P58

PLM Powder & Liquid Mixing System P59-64

PLM Powder & Liquid Mixing System P59–60
PJ&PM,PDH–XT&PD–XT P61–62
PDH–XT&PD–XT P63–64
PDS Automatic Powder/ Liquid Mixing System P65–66

FISCO Reactor System – Industrial Scale P67-68

Fisco P67–68

Eumix Agitator P69-70

Eumix Agitator P69–70

Others P71-72

More Information··· P71
Questionnaire for Model Selection P72

About us

Since the 1990s FLUKO■ has specialized in designing and manufacturing mixing equipment such as high shear dispersers, emulsifiers, homogenizers, agitators, reactors and automatic powder dosing systems. Benefitting from our advanced manufacturing technology, we strive to stay at the cutting edge of innovation and to refine and improve our manufacturing skills. The company has developed a strong management philosophy and our employees are widely appreciated for their thoughtful customer care and conscientious after-sales service. FLUKO■ has built complete systems based on its own research and development, and has become a technology leader in the mixing application field.

Company culture

Our culture is founded on honesty, responsibility, creativity, and gratitude

Core philosophy

Fine FLUKO: Fine spirit

Our mission

Continuous innovation, creating more value for our customers.

FCH202-S、FCH202

Magnetic Stirrer

FCH202-S, FCH202 magnetic stirrer can mix with different type of liquid.

Order #: 6913000

Model: FCH202-S

Order #: 6912000

Model: FCH202

Features & Performance

- Equipped with high-performance processors;
- High-definition digital display of temperature and speed;
- Extra load stored preset function, easy to control;
- Multifunction jog knob, one button to control the whole experiment;
- Rapid heating; precise temperature monitoring;
- Anti-corrosive seamless ceramic panels, aluminum cast;
- Multiple protection, security, stability, and simplicity.

Order #	6913000	6912000
Model	FCH202-S	FCH202
Heat board dimension	180 × 180	
Working capacity(H_2O)	20L	
Motor input/output power	9 / 4W	
Speed range	80 – 1,500rpm	
Minimum speed adjustment	5rpm	
Temperature range	Room temperature ~380℃	
Heat output power	600W	
Panel temperature difference	≤ 10%	
Temperature meter component	Yes	Optional
Permissible temperature range	5 – 50℃	
Permissible humidity range	85%	
Maximum rod length	50	
Control	Digital feedback controller, jog Dial (rotation + Press)	
Display	Temperature and rotation display by LCD	
Timing	0~99 hours 59 minutes 59 seconds	
Panel	Seamless ceramic panel, anti-acid and alkali corrosive solution	
Equipment body	Rust resistant aluminum cast	
Overall dimensions	206 × 307 × 99	
Weight	3.3 kg	
Other	CE certificate	
	Temperature and time settings can be set and saved	
	Lock mode to prevent misuse (Jog button lock inoperable)	
	Alarm function: Operation error or time finishes setting	
Gross weight	5kg	
Power supply	220V, 50/60Hz	

FCH201

Magnetic Stirrer

FCH201 magnetic stirrer is capable of mixing various types of liquid.

Features& Performance

– Equipped with high–performance processors;
– Anti–corrosive seamless ceramic panel;
– Enhanced working capacity, rapid heating;
– Aluminum cast, safe and reliable.

Order #	6911000
Model	FCH201
Heat board dimension	180 × 180
Working capacity(H_2O)	20L
Motor input/output power	9 / 4W
Speed range	0 – 1,500rpm
Minimum speed adjustment	Stepless
Temperature range	Room temperature ~380℃
Heat output power	600W
Panel temperature variation	≤ 10%
Temperature meter component	No
Allowable temperature	5 – 50℃
Allowable humidity	85%
Maximum rod length	50
Control	Advanced PMW pulse controller
Dimension	Scale
Timing	No
Panel	Seamless ceramic panel, anti–acid and alkali corrosive solution
Equipment body	Anti– rust aluminum cast
Overall dimensions	206 × 307 × 99
Weight	2.8kg
Other	CE certificate
Gross weight	5kg
Power supply	220V, 50/60HZ

Order #: 6911000

Model: FCH201

Optional Rod					
Optional shape	Olive	Cylindrical	Octahedral	Oval	Diamond
Maximum Length(mm)	30	50	40	35	40

R10

Air Drive Mixer

Air drive mixer is suitable for dispersing, mixing in extreme environments such as flammability, high-temperature, or high dust concentrations, etc.

Features & Performance

- Equipped with high speed air motor;
- Precise overload protection;
- Multiple optional agitators;
- Reliable performance.

Order #: 6111901

Model: R10

Order #	6111901
Model	R10
Motor power	150W
Air consumption	0.24 m³/min
Ventilation pressure	0-66bar
Working capacity(H_2O)	50-30000ml
Maximum working viscosity	5000CP
Rotation speed range(load free)	3000rpm
Speed display	No
Maximum shaft torque	80Ncm
Medium-contact material	SS316L
Overheating protection	No
Standard dispersing agitator	Four-blade agitator
Permissible temperature range	5-40℃
Permissible humidity range	80%
Agitator fixation	Drill chuck
Clench diameter range	0.5-10mm
Work frame, stand base	Standard
Process type	Batch processing
Overall dimensions	310 × 215 × 730
Weight	~7kg
Package	Carton
Optional agitator	Refer optional agitator (P9-12)

Pneumatic explosion-proof

Air-drive

G30

Eurostar Mixer

Eurostar Mixer can mix, disperse, and do reaction test for different viscosities in the lab.

Features & Performance

– High efficiency and energy saving;
– Precise control, digital display;
– Equipped with Eurostar three–dimensional agitator;
– Low consumption, without dead corner.

Order #	6123908
Model	G30
Motor power	110W
Power supply	220V, 50/60Hz
Working capacity(H2O)	50–30000ml
Maximum working viscosity	5000CP
Speed range	10–2000rpm
Speed display	Digital display
Maximum shaft torque	68Ncm
Medium–contact material	SS316L
Overheating protection	Yes (70℃)
Standard dispersing agitator	Eustar hollow agitator
Permissible temperature range	5–40℃
Permissible humidity range	80%
Agitator fixation	Drill chuck
Clench diameter range	0.5–10mm
Work frame, stand base	Standard
Process type	Batch processing
Overall dimensions	210 × 290 × 675
Weight	~7kg
Package	Carton
Optional agitator	Refer optional agitator (P9–12)

Order #: 6123908

Model: G10

Patent number: ZL 2012 3 0111974.9

Eurostar mixer working principle

R30A、R50A (Powerful)

Electric Stirrer

R30A、R50A electric stirrer can stir and mix different viscosities in the lab.

Order #: 6122901

Model: R30A

Order #: 6132911

Model: R50A

Features& Performance

– New generation common use agitator;
– Equipped with micro–processor and one key jog button;
– High precision speed control;
– Multi–functional adjustability such as speed memory, timing operation, automatic torque compensation etc.

Order #	6122901	6132911
Model	R30A	R50A
Motor power	110W	250W
Power supply	220V, 50/60Hz	220V, 50Hz
Working capacity (H_2O)	50–30000ml	100–50000ml
Maximum working viscosity	5000CP	8000CP
Speed range	0/30–2000rpm	0/30–2500rpm
Timing range	1–6000min	1–6000min
Speed memory	Yes	Yes
Speed control mode	Knob–controlled	Knob–controlled
Precise speed control	1rpm	1rpm
Speed display	Digital display	Digital display
Maximum shaft torque	68Ncm	88Ncm
Medium–contact material	SS316L	SS316L
Standard dispersing agitator	Four–blade agitator	Three–blade agitator
Agitator fixation	Manual chuck	Manual chuck
Clench diameter range	0.5–10mm	0.5–10mm
Overheat protection	Yes(70℃)	Yes(70℃)
Permissible temperature range	5–40℃	5–40℃
Permissible humidity range	80%	80%
Work frame, stand base	Standard	Standard
Process type	Batch processing	Batch processing
Overall dimensions	210 × 290 × 675	210 × 290 × 675
Weight	~7kg	~8.5kg
Package	Carton	Carton
Optional agitator	Refer optional agitator(P9–12)	Refer optional agitator(P9–12)

R50A、i70 optional work frame, stand base

i70 (Multi-function)
Electric Stirrer

i70 electric stirrer can stir and mix medium and high viscosities in the lab.

Features& Performance

– Non carbon brush motor, maintenance free;
– High torque output;
– Low sound design, easy operation;
– Multi–functional adaptability such as precise digital display, timing operation, speed memory, overload protection etc.

Order #	6141000
Model	i70
Motor input power	630W
Motor output power	418W
Power supply	220V, 50Hz
Maximum working capacity (H_2O)	150L
Speed display	Digital display
Speed range	0–2000rpm
Speed memory	Yes
Maximum working viscosity	150000CP
Maximum shaft torque	200Ncm
Medium–contact material	SS316L
Overload protection	Yes
Speed control mode	Stepless
Precise speed control	1rpm
Standard dispersing agitator	Ribbon screw agitator
Agitator fixation	Drill chuck
Clench diameter range	0.5–10mm
Hollow shaft (stop state can be inserted)	Yes
Torque display	Digital display
Timing display	Digital display
Timing mode	Countdown
Time setting range	1–6000min
Permissible temperature range	5–40℃
Permissible humidity range	80%
DIN EN 60529 Ingress protection grade	IP40
Work frame, stand base	Standard
Overall dimensions	215×310×730
Weight	~8kg
Package	Carton
Optional agitator	Refer optional agitator(P9–12)

Order #: 6141000
Model: i70

Mixer

Optional Agitator

Optional Agitator Table

	Agitator Diameter	Shaft Diameter	Shaft Length	Medium Contact Material	Working Viscosity(cp)	Applicable Speed Rotation(rpm)	Function Introduction
 Four-blade Agitator							
Order #: 901	60	8	300	SS316L	< 10000	< 2000	
Order #: 909	110	8	320	SS316L	< 10000	< 2000	Can do regular mix;
 Paddle Agitator							
Order #: 902	50	8	300	SS316L	< 2000	< 1200	Capable of medium viscosity
Order #: 910	100	8	320	SS316L	< 2000	< 1200	macro mixing, dispersing;
 Three-blade Agitator							
Order #: 903	60	8	300	SS316L	< 2000	< 2000	Capable of mixing, dissolving
Order #: 911	110	8	320	SS316L	< 2000	< 2000	and fast reaction;
 Anchor Agitator							
Order #: 904	104	8	300	SS316L	< 100000	< 200	Capable of mixing and
Order #: 912	150	10	320	SS316L	< 100000	< 200	stirring different viscosities;
 Dissolving Agitator							Capable of dispersing,
Order #: 905	60	8	300	SS316L	< 2000	< 2000	dissolving and stirring
Order #: 913	80	8	320	SS316L	< 2000	< 2000	both powders and liquids;
 Centrifugal Agitator							Capable of mixing and
Order #: 906	60/25	8	300	SS316L	< 2000	< 2000	stirring for small diameter
Order #: 914	100/30	8	320	SS316L	< 2000	< 2000	container;
 PTFE Coating Centrifugal Agitator							PTFE coated, suitable for
Order #: 907	60/25	8	300	PTFE	< 2000	< 2000	mixing and stirring with
Order #: 915	100/30	8	320	PTFE	< 2000	< 2000	corrosive materials;
 Eustar Hollow Agitator							Suitable for low, and medium
Order #: 908	80	8	300	SS316L	< 2000	< 2000	viscosity materials; low
Order #: 919	120	8	320	SS316L	< 2000	< 2000	consumption; dispersing, dissolving, stirring with no dead corners;
 Fold Impeller Agitator							
Order #: 921	60	8	300	SS316L	< 2000	< 2000	
Order #: 947	110	8	320	SS316L	< 2000	< 2000	Axial and circulate flow;

Mixer

Optional Agitator

Optional Agitator Table

	Agitator Diameter	Shaft Diameter	Shaft Length	Medium Contact Material	Working Viscosity(cp)	Applicable Speed Rotation(rpm)	Function Introduction
 Flat Impeller Agitator							Axial flow in low speeds
Order #: 920	60	8	300	SS316L	<2000	<1500	radical flow at high
Order #: 946	110	8	320	SS316L	<2000	<1500	speeds;
 Flat Impeller Turbine Agitator							
Order #: 922	60	8	300	SS316L	<50000	<2000	Flow can be radical or
Order #: 948	110	8	320	SS316L	<50000	<2000	turbulence spread;
 Fold Impeller Turbine Agitator							
Order #: 923	60	8	300	SS316L	<10000CP	<2000	Flow can be radical or
Order #: 949	110	8	320	SS316L	<10000CP	<2000	circulatory;
 Bend Impeller Turbine Agitator							
Order #: 924	60	8	300	SS316L	<10000	<2000	Flow can be axial or
Order #: 950	110	8	320	SS316L	<10000	<2000	circulatory;
 Flat Impeller with Disc Turbine Agitator							
Order #: 925	50	8	300	SS316L	<50000	<2000	Radical flow; can do high
Order #: 951	80	8	320	SS316L	<50000	<2000	shear and disperse;
 Fold Impeller with Disc Turbine Agitator							
Order #: 926	50	8	300	SS316L	<10000	<2000	Side flow; can do high
Order #: 952	80	8	320	SS316L	<10000	<2000	shear and disperse;
 Bend Impeller with Disc Turbine Agitator							
Order #: 927	50	8	300	SS316L	<10000	<2000	Axial flow; can both
Order #: 953	80	8	320	SS316L	<10000	<2000	disperse and dissolve;
 Propeller Agitator							
Order #: 928	60	8	300	SS316L	<2000	<2000	Can circulate mix and
Order #: 954	110	8	320	SS316L	<2000	<2000	stir;
 Bulmarking Agitator							Radical flow; can mix
Order #: 929	60	8	300	SS316L	<50000	<1000	and stir with low
Order #: 955	110	8	320	SS316L	<50000	<1000	consumption;

Mixer

Optional Agitator

Optional Agitator Table

	Agitator Diameter	Shaft Diameter	Shaft Length	Medium Contact Material	Working Viscosity(cp)	Applicable Speed Rotation(rpm)	Function Introduction
 Cage Agitator							High rotation speed; capable of mixing and dispersing both powders; and liquids;
Order #: 937	60	8	300	SS316L	< 100000	< 1500	
Order #: 963	80	8	320	SS316L	< 100000	< 1500	
 Anti-foam Agitator							Can do disperse and anti-foam solution;
Order #: 938	100	8	300	SS316L	< 2000	< 500	
Order #: 964	150	8	320	SS316L	< 2000	< 500	
 High-efficiency High-flowrate Agitator							Can do low hear mix, ferment reaction;
Order #: 939	70	8	300	SS316L	< 2000	< 1500	
Order #: 965	120	8	320	SS316L	< 2000	< 1500	
 Kneading Agitator							Can mix and stir to small capacity, high viscosity material;
Order #: 940	45	8	300	SS316L	< 100000	< 2000	
Order #: 966	80	8	320	SS316L	< 100000	< 2000	
 Turbine Agitator							High degree vertical radical; can homogenize and mix thixotropic material;
Order #: 941	50	8	300	SS316L	< 10000	< 2000	
Order #: 967	80	8	320	SS316L	< 10000	< 2000	
 Snake-shape Agitator							Can do radical mix and stir to long molecular chain;
Order #: 943	55	6	300	SS316L	< 10000	< 500	
Order #: 969	102	6	320	SS316L	< 10000	< 500	
 Frame-shape Agitator							Axial and radical flow; can do liquid& liquid mix and heat transfer to middle viscosity material;
Order #: 944	60	8	300	SS316L	< 50000	< 1000	
Order #: 970	80	8	320	SS316L	< 50000	< 1000	
 MIG Agitator							Axial flow; can do solid& liquid suspension, liquid& liquid dispersing, gas& liquid dispersing and heat transfer to bw, middle viscosity material;
Order #: 945	70	8	300	SS316L	< 2000	< 1500	
Order #: 971	100	8	320	SS316L	< 2000	< 1500	

Mixer

Optional Agitator

Optional Agitator Table

	Agitator Diameter	Shaft Diameter	Shaft Length	Medium Contact Material	Working Viscosity(cp)	Applicable Speed Rotation(rpm)	Function Introduction
 Three-blade Bend Agitator							Radical flow; can do circulate mix to large capacity;
Order #: 930	60	8	300	SS316L	< 10000	< 1000	
Order #: 956	110	8	320	SS316L	< 10000	< 1000	
 Frame Paddle Agitator							Increase turbulence around the impeller;
Order #: 931	104	8	300	SS316L	< 100000	< 200	
Order #: 957	150	10	320	SS316L	< 100000	< 200	
 Anchor Ribbon Screw Agitator							Can mix and stir to laminar flow area;
Order #: 932	104	8	300	SS316L	< 100000	< 200	
Order #: 958	150	10	320	SS316L	< 100000	< 200	
 Screw Agitator							Can do axial mix in draft tube;
Order #: 933	45	8	300	SS316L	< 100000	< 500	
Order #: 959	80	8	320	SS316L	< 100000	< 500	
 Ribbon Screw Agitator							Can do two-way axial mix and stir;
Order #: 934	104	8	300	SS316L	< 100000	< 200	
Order #: 960	150	10	320	SS316L	< 100000	< 200	
 High-efficiency Low-consumption Agitator							Can perform homogenized mixing and suspension to low and middle viscosity material
Order #: 935	70	8	300	SS316L	< 2000	< 1500	
Order #: 961	120	8	320	SS316L	< 2000	< 1500	
 Cellular Agitator							Produce turbine and high rotation speed; can do powder& liquid disperse and mix;
Order #: 936	30	8	300	SS316L	< 100000	< 2000	
Order #: 962	60	8	320	SS316L	< 100000	< 2000	
 Planetary Agitator							Axial and radical flow; increase material flow rate;
Order #: 942	88	8	300	SS316L	< 2000	< 500	
Order #: 968	120	8	320	SS316L	< 2000	< 500	

FM200A (Basic)

High Shear Dispersing Emulsifier

FM200A high shear dispersing emulsifier can perform dispersing, emulsifying and homogenizing in the lab.

Order #: 6311451

Model: FM200A

Features& Performance

– Convenient stepless speed control;
– Equipped with two interchangeable agitators;
– Can handle different volumes;
– Low noise, stable operation, easy to clean.

Order #	6311451
Model	FM200A
Motor power	200W
Power supply	220V, 50Hz
Working capacity (H_2O)	10–2000ml
Maximum working viscosity	8000CP
Speed range	200–26000rpm
Speed display	Scale
Speed control	Stepless
Medium–contact material	SS304
Shaft sleeve material	PTFE
Standard dispersing agitator	10G、20G
Permissible temperature range	5–40℃
Permissible humidity range	80%
Process type	Batch processing
Work frame, stand base	Standard
Overall dimensions	225×328×600
Weight	~9kg
Package	Carton
Optional agitator	8G、10G、18G

8G
Order #: 431

10G
Order #: 441

20G
Order #: 451

FM300 (Double Stator)

High Shear Dispersing Emulsifier

FM300 high shear dispersing emulsifier can perform dispersing, homogenizing and emulsifying for medium viscosity, high temperature and pilot batch;

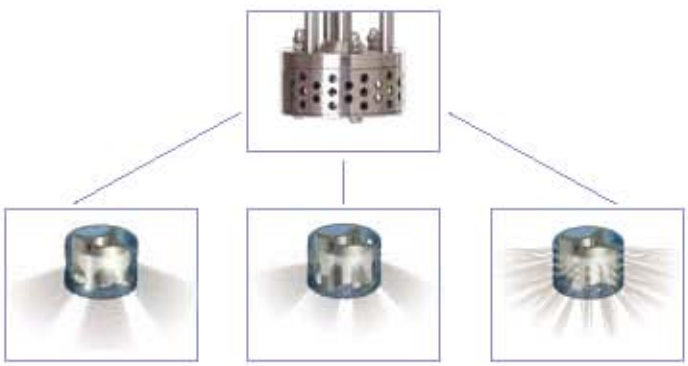
Features& Performance

– Stepless control, high temperature resistant motor, strong torque output;
– Double stator structure, better shear effect;
– Equipped with multiple type interchangeable stator;
– Double safety protection.

Order #	6312000
Model	FM300
Motor power	300W
Power supply	220V, 50Hz
Working capacity (H_2O)	200–10000ml
Maximum working viscosity	5000CP
Speed range	300–11000rpm
Speed display	Scale
Speed control	Stepless
Medium–contact material	SS304
Shaft sleeve material	Copper alloy
Permissible temperature range	5–40℃
Permissible humidity range	80%
Process type	Batch processing
Work frame, stand base	Standard
Independent speed controller	Standard
Overall dimensions	210×290×675
Weight	~13kg
Package	Carton
Stator type	Round, slot, mesh opening

Order #: 6312000

Model: FM300



round slot mesh opening

FM20-D (Digital)

High Shear Dispersing Emulsifier

FM20-D high shear dispersing emulsifier can do dispersing, emulsifying and homogenizing with middle viscosity material.

Features& Performance

- Stepless contrl, strong torque output;
- Equipped with different type stator;
- Multiple functions;
- Capable of dispersing, emulsifying, homogenizing, mixing etc;
- Easy assembly and disassembly.

Order #: 6321000

Model: FM20-D

Order #	6321000
Model	FM20-D
Motor power	300W
Power supply	220V, 50Hz
Working capacity (H_2O)	150-3000mL
Maximum working viscosity	5000CP
Speed range	300-11000rpm
Speed display	Digital display
Speed control	Stepless
Medium-contact material	SS316L
Shaft sleeve material	PTFE
Permissible temperature range	5-40℃
Permissible humidity range	80%
Process type	Batch processing
Work frame, stand base	Standard
Overall dimensions	210×290×675
Weight	~10kg
Package	Carton

Working agitator: easy assembly and disassembly

FM30-D (Digital display, with double stator)

High Shear Dispersing Emulsifier

FM30-D high shear dispersing emulsifier can perform dispersing, homogenizing and emulsifying for medium viscosity and pilot batch;

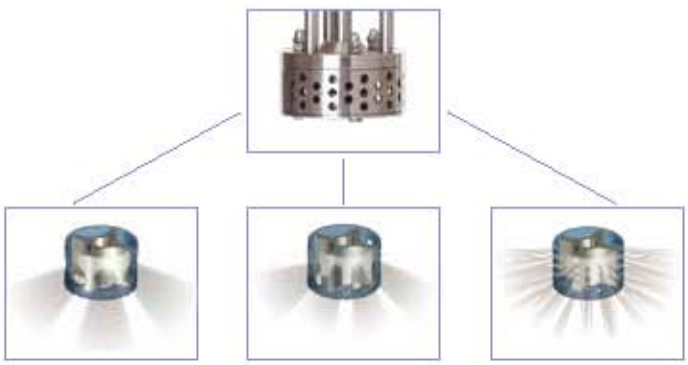
Features& Performance

- Stepless control, precise digital display, strong torque output;
- Double stator structure, better shear effect;
- Equipped with multiple type interchangeable stator;
- Double safety protection.

Order #	6322000
Model	FM30-D
Motor power	300W
Power supply	220V, 50Hz
Working capacity (H_2O)	200-10000ml
Maximum working viscosity	5000CP
Speed range	300-11000rpm
Speed display	Digital display
Speed control	Stepless
Medium-contact material	SS304
Shaft sleeve material	Copper alloy
Permissible temperature range	5-40℃
Permissible humidity range	80%
Process type	Batch processing
Work frame, stand base	Standard
Overall dimensions	360 x 260 x 760
Weight	~10kg
Package	Carton
Stator type	Round, slot, mesh opening

Order #: 6322000

Model: FM30-D



round slot mesh opening

F6/10 (Micro Processing)、 **F8** (Battery Power)

Superfine Homogenizer

F6/10 superfine homogenizer is suitable for tissue tearing, cell disruption, protein extraction, and medical research etc., widely used in biochemistry industries and for field work.

Order #: 6171101

Model: F6/10

Patent number: ZL 02 3 13250.7

Order #: 6221082

Model: F8

Patent number: ZL 2009 3 0099264.7

Features& Performance

– More user–friendly handhled design;
– Superior quality motor with ultra–strong power;
– Minimum capacity is as low as 0.1ml;
– Suitable for micro emulsifying and homogenizing;
– Double insulation protection for safety.

Order #	6171101	6221082
Model	F6/10	F8
Motor power	145W	/
Power supply	220V, 50Hz	9.6V (Ni–Cd battery)
Working capacity (H_2O)	0.1–150ml	0.1–60mL
Maximum working viscosity	200CP	100CP
Speed range	5000–35000rpm	10000–25000rpm
Speed display	Scale	Scale
Speed control	Stepless	Stepless
Medium–contact material	SS316L	SS316L
Shaft sleeve material	PTFE	PTFE
Standard dispersing agitator	10GZL	8GZL
Permissible temperature range	5–40℃	5–40℃
Permissible humidity range	80%	80%
Process type	Little volume batch	Little volume batch
Work frame	Standard	Optional
Overall dimensions	420×100×50	420×100×50
Weight	~0.85kg	1kg
Package	Carton	Carton
Optional agitator	Refer optional agitator(P18)	Refer optional agitator(P18)

F8 is equipped with charge, well for field work.



F6/10、F8

Optional Agitator

Optional Agitator Table

	Working Capacity	Maximum Working Viscosity	Maximum Rotation Speed	Minimum/ Maximum Immersion Depth	Agitator Length	Maximum Working Temperature	Medium Contact Material
 Order #: 071 Model: 4GZL	0.1–5ml	100CP	4m/s	22/45	100	120℃	SS316L、PTFE
 Order #: 081 Model: 6GZL	0.2–10ml	100CP	8m/s	25/45	124	120℃	SS316L、PTFE
 Order #: 091 Model: 8GZL	1–60ml	100CP	10m/s	30/85	150	120℃	SS316L、PTFE
 Order #: 101 Model: 10GZL	30–150ml	200CP	12m/s	30/120	187	120℃	SS316L、PTFE
 Order #: 082 Model: 6GZL–1	0.2–10ml	100CP	8m/s	25/45	124	120℃	SS316L、PTFE
 Order #: 092 Model: 8GZL–1	1–60ml	100CP	10m/s	30/85	150	120℃	SS316L、PTFE
 Order #: 102 Model: 10GZL–1	30–150ml	200CP	12m/s	30/120	187	120℃	SS316L、PTFE

FA25、FA25-D (Digital)

High Shear Dispersing Emulsifier

FA25 high shear dispersing emulsifier can complete many different processes in the laboratory, including dispersing, emulsifying, homogenizing and grinding, equipped with different dispersing agitators for different applications. It is an integration of high power, versatility, reliability and durability to meet your strict requirements, and has proven to be an extremely popular product.

Order #: 6221052

Model: FA25

Patent number: ZL 02 3 13251.5

Features& Performance

– Maximum high rotation speed is 28,000rpm and velocity is up to 27m/s;
– Smart modular design for flexible operation and high expansibility;
– Many quick interchangeable dispersing tools for different materials;
– Medium–contact materials are SS316L for sanitation purpose;
– Materials of low to high viscosities can be handled very well;
– High temperature and vacuum/pressurized conditions are workable.

Order #	6221052	6223052
Model	FA25	FA25–D
Motor power	500W	500W
Power supply	220V, 50/60Hz	220V, 50/60Hz
Working capacity (H_2O)	0.2–7000ml	0.2–7000ml
Maximum working viscosity	8000CP	8000CP
Speed range (no–load)	10000–28000rpm	10000–28000rpm
Speed display	Scale	Digital display
Speed control	Stepless	Stepless
Medium–contact material	SS316L	SS316L
Shaft sleeve material	PTFE	PTFE
Standard dispersing agitator	25F	25F
Permissible temperature range	5–40℃	5–40℃
Permissible humidity range	80%	80%
Process type	Batch processing	Batch processing
Work frame, stand base	Standard	Standard
Overall dimensions	215×310×730	215×310×730
Weight	~7.1kg	~7.1kg
Package	Carton	Carton
Optional agitator	Refer optional agitator(P21–22)	Refer optional agitator(P21–22)

Order #: 6223052

Model: FA25–D

Patent number: ZL 2011 3 0334881.8

FAR25 (Air drive)

High Shear Dispersing Emulsifier

The FAR25 high shear dispersing emulsifier is as powerful as FA25, and is compatible with FA25 dispersing agitators. It can also handle organic solvents or other inflammable and explosive materials.

Features& Performance

– Equipped with high speed air motor;
– Suitable for explosive or other hazardous conditions;
– Smart compact structure and modular design;
– Easy operation and very safe running.

Order #	6224052
Model	FAR25
Motor power	670W
Air consumption	0.8m³/min
Ventilation pressure	0–6bar
Working capacity(H_2O)	0.2–5000ml
Maximum working viscosity	5000CP
Rotation speed range(no–load)	14000rpm
Speed control	Stepless
Medium–contact material	SS316L
Shaft sleeve material	PTFE
Standard dispersing agitator	25F
Permissible temperature range	5–40℃
Permissible humidity range	80%
Process type	Batch processing
Work frame, stand base	Standard
Overall dimensions	215 x 310 x 730
Weight	~7kg
Package	Carton
Optional agitator	Refer optional agitator(P21–22)

Order #: 6224052
Model: FAR25

Pneumatic explosion–proof

Air–drive

FA25 series

Optional agitator

Refer optional agitator

	Working Capacity	Maximum Working Viscosity	Maximum Rotation Speed	Minimum/ Maximum Immersion Depth	Agitator Length	Maximum Working Temperature	Pressure Tolerance	Medium Contact Material	Features Applications
 Order #: 001 Model: 6G	0.2–10ml	100CP	6m/s	25/45	115	120℃	No	SS316L、PTFE	Suitable for animal tissue dispersing, crushing, and homogenizing;
 Order #: 011 Model: 8G	1–60ml	100CP	8m/s	30/85	150	120℃	No	SS316L、PTFE	Suitable for animal tissue dispersing, crushing, and homogenizing;
 Order #: 021 Model: 10G	10–150ml	200CP	10m/s	30/135	200	120℃	No	SS316L、PTFE	Suitable for animal tissue dispersing, crushing, and homogenizing;
 Order #: 031 Model: 18G	50–1500ml	3000CP	19m/s	35/180	255	120℃	No	SS316L、PTFE	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. with medium or higher level viscosity;
 Order #: 032 Model: 18F	50–1500ml	2000CP	19m/s	35/180	255	120℃	No	SS316L、PTFE	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. with medium or lower level viscosity;
 Order #: 041 Model: 20DG	50–3000ml	3000CP	22m/s	40/180	255	180℃	Yes	SS316L,Graphite, Ceramic, FKM	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. under vacuum or pressure environment;
 Order #: 042 Model: 20DF	50–3000ml	3000CP	22m/s	40/180	255	180℃	Yes	SS316L,Graphite, Ceramic, FKM	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. under vacuum or pressure environment;
 Order #: 051 Model: 25G	50–5000ml	5000CP	27m/s	35/180	258	120℃	No	SS316L、PTFE	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. with medium or higher level viscosity;
 Order #: 052 Model: 25F	50–5000ml	3500CP	27m/s	35/180	258	120℃	No	SS316L、PTFE	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. with medium or lower level viscosity;
 Order #: 053 Model: 25DG	100–5000ml	5000CP	27m/s	40/180	255	180℃	Yes	SS316L,Graphite, Ceramic, FKM	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. under vacuum or pressure environment;

FA25 series

Optional agitator

Refer optional agitator

	Working Capacity	Maximum Working Viscosity	Maximum Rotation Speed	Minimum/ Maximum Immersion Depth	Agitator Length	Maximum Working Temperature	Pressure Tolerance	Medium Contact Material	Features Applications
 Order #: 054 Model: 25DF	100-5000ml	5000CP	27m/s	40/180	255	180℃	Yes	SS316L, Graphite, Ceramic, FKM	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. under vacuum or pressure enviornment;
 Order #: 055 Model: 25J	150-7000ml	8000CP	35m/s	65/190	263	120℃	No	SS316L, PTFE	Vertical mix with potent stength, can do powder& liquid mixing;
 Order #: 056 Model: 25J-Q	150-7000ml	8000CP	35m/s	65/190	263	120℃	No	SS316L, PTFE	Vertical mix with shear force, can do powder& liquid mixing with low shear force;
 Order #: 057 Model: 25J-X	150-7000ml	8000CP	35m/s	65/190	263	120℃	No	SS316L, PTFE	Vertical mix with shear force, can do powder& liquid mixing with low shear force;
 Order #: 058 Model: 25T1	100-7000ml	8000CP	27m/s	35/180	258	120℃	No	SS316L, PTFE	Suitable for medium viscosity liquid-liquid mixing, powder suspension etc.;
 Order #: 059 Model: 25T2	100-6000ml	8000CP	27m/s	35/180	258	120℃	No	SS316L, PTFE	Suitable for high turbulent mixing, low shear mixing, liquid-liquid mixing, powder suspension etc.;
 Order #: 060 Model: 25T3	50-3000ml	5000CP	27m/s	35/180	255	120℃	No	SS316L, PTFE	Suitable for solid / liquid dispersing, for wet grinding, effectively reducing the particle size, increase uniformity;
 Order #: 061 Model: 25T4	50-5000ml	5000CP	27m/s	35/180	255	120℃	No	SS316L, PTFE	Suitable for super dispersing, tissue disruption, suitable for animal and plant tissue grinding, homogenizing, dispersing, and shearing;
 Order #: 062 Model: 25T5	50-5000ml	5000CP	27m/s	35/180	255	120℃	No	SS316L, PTFE	Suitable for high viscosity dispersing, and homogenizing;
 Order #: 063 Model: 25T6	50-5000ml	5000CP	35m/s	35/180	255	120℃	No	SS316L, PTFE	Ultra-high-speed stirring, suitable for dissolving and dispersing to high viscosity material;

FA30 (High Line Speed)

High Shear Dispersing Emulsifier

FA30 high shear dispersing emulsifier has higher velocity and greater efficiency in completing dispersing, homogenizing, emulsifying and mixing.
The working capacity is up to 10L.

Features& Performance

- High speed powerful motor ensures good and stable effect;
- High velocity ensures more uniform products in shorter process time;
- High viscosity materials can be handled efficiently due to high torque;
- Different dispersing agitator are interchangeable;
- Modular design and easy operation.

Order #: 6231111
Model: FA30

Order #	6231111
Model	FA30
Motor power	1050W
Power supply	220V, 50/60Hz
Working capacity (H2O)	150–10000ml
Maximum working viscosity	8000CP
Speed range	10000–30000rpm
Speed display	Scale
Speed control	Stepless
Medium–contact material	SS316L
Shaft sleeve material	PTFE
Standard dispersing agitator	30G
Permissible temperature range	5–40℃
Permissible humidity range	80%
Work frame, stand base	Standard
Overall dimensions	215×310×730
Weight	~7.5kg
Package	Carton
Optional agitator	Refer optional agitator

Refer optional agitator

	Working Capacity	Maximum Working Viscosity	Maximum Rotation Speed	Minimum/ Maximum Immersion Depth	Agitator Length	Maximum Working Temperature	Pressure tolerance	Medium Contact Material	Features Applications
 Order #: 111 Model: 30G	150–10000ml	5000CP	37m/s	35/200	278	120℃	No	SS316L、PTFE	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. with medium or higher level viscosity;
 Order #: 121 Model: 30F	150–10000ml	3500CP	37m/s	35/200	278	120℃	No	SS316L、PTFE	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. with medium or lower level viscosity;
 Order #: 112 Model: 30DG	200–10000ml	5000CP	37m/s	45/220	295	180℃	Yes	SS316L,Graphite, Ceramic, FKM	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. under vacuum or pressure enviornment;
 Order #: 122 Model: 30DF	200–10000ml	3500CP	37m/s	45/220	295	180℃	Yes	SS316L,Graphite, Ceramic, FKM	Suitable for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. under vacuum or pressure enviornment;

FA40 (High Line Speed)

High Shear Dispersing Emulsifier

Features& Performance

- High speed powerful motor ensures good and stable effect;
- High velocity ensures more uniform products in shorter process time;
- High viscosity materials can be handled well due to high torque;
- Different dispersing agitator interchangeablility;
- Modular design and easy operation.

The FA40 high shear dispersing emulsifier has higher velocity and can complete dispersing, homogenizing, emulsifying and mixing, more efficiently.
The working capacity is up to 20L.

Order #	6241131
Model	FA40
Motor power	1800W
Power supply	220V, 50/60Hz
Working capacity (H_2O)	500–15000ml
Maximum working viscosity	8000CP
Speed range	2500–23500rpm
Speed display	Scale
Speed control	Stepless
Medium–contact material	SS316L
Shaft sleeve material	PTFE
Standard dispersing agitator	40M
Permissible temperature range	5–40℃
Permissible humidity range	80%
Work frame, stand base	Standard
Overall dimensions	250×350×860
Weight	~12kg
Package	Wooden case
Optional agitator	Refer optional agitator

Order #: 6241131

Model: FA40

Refer optional agitator

	Working Capacity	Maximum Working Viscosity	Maximum Rotation Speed	Minimum/ Maximum Immersion Depth	Agitator Length	Maximum Working Temperature	Medium Contact Material	Features Applications
 Order #: 131 Model: 40M	500–15000ml	5000CP	40m/s	65/265	390	120℃	SS316L、PTFE	Performs powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. with medium or lower level viscosity;
 Order #: 141 Model: 40G	500–15000ml	7000CP	40m/s	65/265	390	120℃	SS316L、PTFE	Performs powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc. with medium or higher level viscosity;
 Order #: 151 Model: 40J	1000–15000ml	8000CP	40m/s	65/265	390	120℃	SS316L、PTFE	Vertical mix with potent strength, can do powder& liquid mixing, dissolving, glue melting;

FA60 (Pilot)

High Shear Dispersing Emulsifier

The FA60 high shear dispersing emulsifier efficiently undertakes stirring, dispersing, homogenizing, emulsifying, strong mixing, powder/liquid dispersing, mixing, and other functions. It is designed for pilot scale work, and is good for simulation exercises.

Order #: 6261161

Model: FA60(Electric lifting)

Order #: 6262161

Model: FA60(Manual weight lifting)

Features& Performance

- Working capacity up to 30L;
- Interchangeable dispersing agitator, meet different requirements;
- Integrated controls such as speed control, speed display, electric lifting and so on.

Order #	6261161
Model	FA60
Motor power	750W
Power supply	220V, 50Hz
Working capacity(H_2O)	5-30L
Maximum working viscosity	5000CP
Speed range	300-6000rpm
Speed display	Digital display
Speed control	frequency control
Medium-contact material	SS316L
Shaft sleeve material	PTFE
Standard dispersing agitator	60F
Permissible temperature range	5-40℃
Permissible humidity range	80%
Protection grade for motor hood	IP54
Inverter	Standard
Overload protection	Yes
Process type	Batch processing
Work frame, stand base	Electric ligt
Work frame, stand base material	SS304、CS Coated
lifting range	350
Overall dimensions	500×400×915
Weight	~35kg
Package	Wooden case
Optional agitator	Refer optional agitator
Optional work frame	Manual weight lifting

FA60

Optional agitator

Refer optional agitator

	Working Capacity	Maximum Working Viscosity	Maximum Line Speed	Minimum/ Maximum Immersion Depth	Agitator Length	Maximum Working Temperature	Medium Contact Material	Features Applications
 Order #: 171 Model: 60G	5-30L	6000CP	6000rpm	55/260	362	120℃	SSS316L、PTFE	Designed for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc for medium or higher level viscosity;
 Order #: 211 Model: 60M	5-30L	5000CP	6000rpm	55/260	362	120℃	SS316L、PTFE	Designed for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc for medium or lower level viscosity;
 Order #: 161 Model: 60F	5-30L	4000CP	6000rpm	55/260	362	120℃	SS316L、PTFE	Designed for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc for medium or lower level viscosity;
 Order #: 191 Model: 60J	5-30L	8000CP	6000rpm	55/260	362	120℃	SS316L、PTFE	Vertical mix with potent strength, can do powder& liquid mixing;
 Order #: 193 Model: 60J-Q	5-30L	8000CP	6000rpm	55/260	362	120℃	SS316L、PTFE	Vertical mix with shear force, can do powder& liquid mixing with low shear force;
 Order #: 194 Model: 60J-X	5-30L	8000CP	6000rpm	55/260	362	120℃	SS316L、PTFE	Vertical mix with shear force, can do powder& liquid mixing with middle shear force;
 Order #: 221 Model: 60C	5-30L	6000CP	4000rpm	55/260	362	120℃	SS316L、PTFE	Dissolving and dispersing: can do dispersing, stirring, mixing, dissolving with medium or higher viscosity;
 Order #: 231 Model: 60T	5-30L	2000CP	1500rpm	55/260	362	120℃	SS316L、PTFE	High-speed propulsion stir: can do axial flow mixing with low viscosity;
 Order #: 201 Model: 60PJ	5-30L	2000CP	6000rpm	55/260	362	120℃	SS316L、PTFE	Powder-liquid dispersing: can do powder sucking, rapid mixing with light powder.

FA90 (Pilot)

High Shear Dispersing Emulsifier

The FA90 high shear dispersing emulsifier efficiently performs the following functions: stirring, dispersing, homogenizing, emulsifying, strong mixing, powder/liquid dispersing and mixing etc,.

It is designed for pilot scale, and is good for simulation exercises.

Order #: 6291241

Model: FA90(Electric lifting)

Patent number: ZL 03 3 32044.6

Order #: 6292241

Model: FA90(Manual hydraulic lifting)

Features& Performance

- Working capacity up to 50L;
- Interchangeable dispersing agitator, meet different requirements;
- Integrated controls such as speed control, speed display, electric; lifting and so on.

Order #	6291241
Model	FA90
Motor power	1500W
Power supply	220V, 50Hz
Working capacity(H_2O)	10-50L
Maximum working viscosity	8000CP
Speed range	600-3600rpm
Speed display	Digital display
Speed control	frequency control
Medium-contact material	SS316L
Shaft sleeve material	PTFE
Standard dispersing agitator	90F
Permissible temperature range	5-40℃
Permissible humidity range	80%
Protection grade for motor hood	IP54
Inverter	Standard
Overload protection	Yes
Process type	Batch processing
Work frame, stand base	Electric ligt
Work frame, stand base material	SS304、CS Coated
lifting range	400
Overall dimensions	710×550×1060
Weight	~50kg
Package	Wooden case
Optional agitator	Refer optional agitator
Optional work frame	Manual hydraulic lifting, manual weight lifting

FA90

Optional agitator

Refer optional agitator

	Working Capacity	Maximum Working Viscosity	Maximum Line Speed	Minimum/ Maximum Immersion Depth	Agitator Length	Maximum Working Temperature	Medium Contact Material	Features Applications
 Order #: 251 Model: 90G	10–50L	6000CP	3600rpm	50/335	457	120℃	SS316L、PTFE	Designed for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc for medium or higher level viscosity;
 Order #: 241 Model: 90F	10–50L	4000CP	3600rpm	50/335	457	120℃	SS316L、PTFE	Designed for powder& liquid mixing, oil/water emulsion, cream preparation, emulsion polymerization, silicone oil emulsification, homogenization etc for medium or bwer level viscosity;
 Order #: 261 Model: 90J	10–50L	8000CP	3600rpm	50/335	457	120℃	SS316L、PTFE	Vertical mix with potent strength, can do powder& liquid mixing;
 Order #: 302 Model: 90JM	10–50L	6000CP	3600rpm	50/335	457	120℃	SS316L、PTFE	Vertical mix with potent strength, can do powder& liquid mixing;
 Order #: 262 Model: 90J–D	10–50L	8000CP	3600rpm	50/335	457	120℃	SS316L、PTFE	Vertical mix with shear force, can do powder& liquid mixing with low shear force;
 Order #: 263 Model: 90J–X	10–50L	8000CP	3600rpm	50/335	457	120℃	SS316L、PTFE	Vertical mix with shear force, can do powder& liquid mixing with middle shear force;
 Order #: 301 Model: 90M	10–50L	8000CP	3600rpm	50/335	457	120℃	SS316L、PTFE	Suitable for medium or higher viscosity emulsifying and wide range mixing;
 Order #: 281 Model: 90C	10–50L	6000CP	3000rpm	50/335	457	120℃	SS316L、PTFE	Dissolving and dispersing: can do dispersing, stirring, mixing, dissolving with medium or higher viscosity;
 Order #: 291 Model: 90T	10–50L	2000CP	1500rpm	50/335	457	120℃	SS316L、PTFE	High–speed propulsion stir: can do axial flow mixing with low viscosity;
 Order #: 271 Model: 90PJ	10–50L	3000CP	3600rpm	50/335	457	120℃	SS316L、PTFE	Powder–liquid dispersing: can do powder sucking, rapid mixing with light powder.

MS10、MS20 (No- bearing Design)

High Shear Dispersing Emulsifier

The MS10, MS20 high shear dispersing emulsifier can complete dispersing, homogenizing, emulsifying and mixing, and meet requirements of high temperature, corrosion proof and hygiene.

Features& Performance

- No-bearing design, environment friendly;
- Easy cleaning and conforming with GMP Regulations;
- Stable rotation, adjustable and readable;
- Compact and functional design, convenient operation;
- Electric lifting stand, available and flexible.

Order #: 6411341	Order #: 6412381
Model: MS10	Model: MS20

Order #	6411341	6412381
Model	MS10	MS20
Motor power	550W	1500W
Power supply	220V, 50HZ	220V, 50HZ
Protection grade for motor hood	IP54	IP54
Speed range	600-6000rpm	600-3000rpm
Speed display	Digital display	Digital display
Speed control	frequency control	frequency control
Working capacity(H_2O)	1-10L	3-15L
Standard dispersing agitator	High shear agitator	High shear agitator
Maximum line speed	12m/s	10m/s
Medium-contact material	SS316L	SS316L
Inverter	Standard	Standard
Electric control box	Standard	Standard
Electric control box material	SS304	SS304
Work frame	Electric lifting stand	Electric lifting stand
Work frame material	SS304	SS304
Sound	85 dB(A)	85 dB(A)
Weight	44kg	44kg
Overall dimensions	463 x 575 x 780mm	463 x 575 x 780mm
Package	Wooden case	Wooden case

Other optional agitator

No-bearing Design

MS10、MS20 optional agitator

Propeller agitator

Dissolving agitator

Grinding agitator

F22Z、F30Z、F40Z (Inline)

High Shear Dispersing Emulsifier

The F22Z、F30Z、F40Z high shear dispersing emulsifier can complete inline dispersing, emulsifying, homogenizing etc..

Features& Performance

- Efficient dispersing and homogenizing with no dead corner;
- High power motor imported from Germany;
- Special design rotor/stator generate super high shear force;
- Can simulate inline or batch circulation process;
- Optional stainless steel and glass jacket working chamber.

Order #	6511000	6521000	6531000
Model	F22Z	F30Z	F40Z
Motor power	500W	1050W	1800W
Power supply	220V, 50/60Hz	220V, 50/60Hz	220V, 50/60Hz
Flow rate range(H_2O)	1-15L/min	1-30L/min	1~30L/min
Maximum working viscosity	1000CP	1000CP	1000CP
Speed range	10000-28000rpm	10000-30000rpm	2500-23500rpm
Temperature	120℃	120℃	120℃
Speed display	Scale display	Scale display	Scale display
Speed control	Stepless	Stepless	Stepless
Medium-contact material	SS316L、FKM	SS316L、FKM	SS316L
Standard working chamber	Stainless steel chamber without jacket	Stainless steel chamber without jacket	Working chamber without jacket
Standard dispersing agitator	20DG	25DG	40DG
Mechanical seal material	SiC, FKM, Ceramics	SiC, FKM, Ceramics	SiC, FKM, Ceramics
Inlet/outlet size	14 (Hose connection)	14 (Hose connection)	DN15, DN10 (Clamp connection)
Process type	Inline processing	Inline processing	Inline processing
Working base material	SS304	SS304	SS304
Overall dimensions	477 x 120 x 122	665 x 120 x 135	675 x 200 x 175
Weight	~6kg	~7kg	~12kg

Order #: 6511000
Model: F22Z

Order #: 6521000
Model: F30Z

Order #: 6531000
Model: F40Z

Optional working chamber

Stainless steel chamber with jacket

Glass jacket

FDC1/40、FDC1/60 (Inline)

High Shear Dispersing Emulsifier

The FDC1/40、FDC1/60 high shear dispersing emulsifier can very easily complete inline dispersing, emulsifying, homogenizing and so on. These pilot inline equipment can provide adequate data as basis for industrial production.

Features& Performance

- Compact equipment design and longtime stable running;
- Special design 1 pair rotor/stator;
- Can simulate inline or batch process;
- Adjustable speed by variable frequency drive;
- Hygienic design, in compliance with sanitation requirements.

Order #	6711000	6731000
Model	FDC1/40	FDC1/60
Motor power	750W	1500W
Power supply	220V, 50Hz	220V, 50Hz
Maximum flow rate range(H2O)	20L/min	30L/min
Speed range	300-6000rpm	300-6000rpm
Temperature	120℃	120℃
Speed display	Digital display	Digital display
Speed control	frequency control	frequency control
Inverter	Standard	Standard
Medium-contact material	SS316L、FKM	SS316L、FKM
Standard working chamber	Working chamber without jacket	Working chamber without jacket
Standard dispersing agitator	4G	4G
Seal type	Mechanical seal	Mechanical seal
Inlet/outlet size	DN15、DN10(Clamp connection)	DN20、DN15(Clamp connection)
Process type	Inline processing	Inline processing
Overall dimensions	460×160×265	560×220×340
Protection grade for motor hood	IP54	IP54

Order #: 6711000 Order #: 6731000

Model: FDC1/40 Model: FDC1/60

FDC3/40、FDC3/60 (More-stage Inline)

High Shear Dispersing Emulsifier

The FDC3/40、FDC3/60 inline high shear dispersing emulsifier can easily complete inline dispersing, emulsifying, homogenizing etc. This pilot equipment can simulate inline or batch circulation processes, and provide adequate data for industrial production.

Features& Performance

- Compact equipment design and longtime stable running;
- Special design 3 pair rotor/stator;
- Can simulate inline or batch process;
- Adjustable speed by variable frequency drive;
- Hygienic design, in compliance with sanitation requirements.

Order #	6721000	6741000
Model	FDC3/40	FDC3/60
Motor power	1500W	2200W
Power supply	220V，50Hz	220V，50Hz
Maximum flow rate range(H_2O)	15L/min	25L/min
Speed range	300–6000rpm	300–6000rpm
Temperature	120℃	120℃
Speed display	Digital display	Digital display
Speed control	frequency control	frequency control
Inverter	Standard	Standard
Medium–contact material	SS316L、FKM	SS316L、FKM
Standard working chamber	Working chamber without jacket	Working chamber without jacket
Standard dispersing agitator	2G/2M/2F	4G/4M/4F
Seal type	Mechanical seal	Mechanical seal
Inlet/outlet size	DN15、DN10 (Clamp connection)	DN20、DN15 (Clamp connection)
Process type	Inline processing	Inline processing
Overall dimensions	500×160×265	690×220×340
Protection grade for motor hood	IP54	IP54

Order #: 6721000

Model: FDC3/40

Order #: 6741000

Model: FDC3/60

Fisco ®

Reactor System—Lab Scale

The Fisco lab reactor includes working capacity of 0.5L, 1L, 2L, 5L and 10L. It can complete dispersing, emulsifying, homogenizing, mixing, reacting, fermenting, cream perpetrating, polymerizing, synthesis reacting, under vacuum or pressurized conditions. Combine with macro mixing system, micro emulsifying system, vacuum system, temperature control system, multi-sensor detecting system; it can fully simulate industrial production.

Patent number: ZL 2008 3 02750116

Fisco ®

Reactor System—Lab Scale

Order #	6811000	6812000	6813000
Model	Fisco-1L	Fisco-2L	Fisco-5L
Power supply	220V, 50/60Hz	220V, 50/60Hz	220V, 50/60Hz
Minimum mixing capacity	300ml	500ml	1000ml
Minimum emulsifying capacity	500ml	1000ml	2000ml
Maximum emulsifying capacity	1000ml	2000ml	5000ml
Maximum working temperature	120℃	120℃	120℃
Vacuum condition	-0.0975MPa	-0.0975MPa	-0.0975MPa
Maximum working viscosity	100,000CP	100,000CP	100,000CP
Mixer motor power	50W	50W	50W
Mixer speed range	10-200rpm	10-200rpm	10-200rpm
Standard mixer agitator	Anchor agitator with scrapper	Anchor agitator with scrapper	Anchor agitator with scrapper
Scrapper material	Silicon rubber	Silicon rubber	Silicon rubber
Homogenizer motor power	500W	500W	500W
Homogenizer speed range	10000-28000rpm	10000-28000rpm	10000-28000rpm
Standard homogenizer agitator	20DG	20DG	25DG
Openings on cover	Homogenizer opening with hopper opening thermometer opening, vacuum opening, 3 spare opening	Homogenizer opening with hopper opening thermometer opening, vacuum opening, 3 spare opening	Homogenizer opening with hopper opening thermometer opening, vacuum opening, 3 spare opening
Lifting height	210	210	270
Medium-contact material	SS316L, borosilicate glass, FKM	SS316L, borosilicate glass, FKM	SS316L, borosilicate glass, FKM
Outer diameter of vacuum opening	10	10	10
Jacket inlet/outlet size	12	12	16
Permissible temperature range	5-40℃	5-40℃	5-40℃
Permissible humidity range	80%	80%	80%
Overall dimensions	400×390×780	400×390×780	480×420×850
Weight	~35kg	~37kg	~42kg
Package	Wooden case	Wooden case	Wooden case

Fisco basic

Fisco®

More choices, more inspirations

Basic

Multifunction

Powerful

Drop tube

Condenser

Peristaltic pump

FA25/FA25-D

FA30

FA40

Display

Inline PH

Inline conductivity

Inline pressure

2SG

25T2

Stainless steel vessel

Stainless steel vessel with bottom discharge

Glass vessel with bottom discharge

Anchor ribbon agitator with scrapper

Anchor agitator with scrapper

Dissolving Agitator

Pressure source

Water-ring vacuum pump

Diaphragm vacuum pump

Cooling heater

water bath, oil bath

Sterile sampling valve

Fisco® (Multifunction)

Reactor System—Lab Scale

Emulsifying System

Select FLUKO specially designed models as core for emulsifying system to ensure better dispersing, emulsifying, homogenizing and mixing effects.

Agitating System

Designed with brand new concept, it is applicable for various materials of wide viscosity range. There are many different agitators available for your selection, some with scrappers.

Expanded Modular Systems

Vessel cover is molding designed integration, with several universal openings. The seal rings in every opening are with perfect seal performance and corrosive proof. Many external equipments can be connected for different functions, for example temperature measurement, emulsifying, conductivity measurement, vacuum condition, feeding during process, etc..

Vessel

Both glass and stainless steel vessels are available. Temperature can be simply controlled by oil or water bath. It can also well work under positive or negative pressures.

Lifting System

Professional built–in mute electric lifting stand ensures quiet and stable lifting.

Features & Performance

– Smart and compact design to save experiment room;
– High reproducibility;
– More external equipments can be connected;
– It can be precisely scaled up for industrial production.

⚠ **Remarks**

The system can be customized for special processes and conditions, for example high temperature, high pressure, flammable, explosive and corrosive conditions.

Hishear® High Shear Dispersing Emulsifier

More homogeneous, more exquisite sophisticated, more stable...

Super strong high shear force, generated by a specially designed stator/rotor system, ensures rapid reduction of liquid particle sizes, and thus produce more stable emulsions and more uniform dispersions. Our full range of equipment, from lab, pilot to mass production scale, can satisfy many different installations and various non-standard specifications.

Working Principle

The high shear dispersing and emulsifying process efficiently, rapidly and uniformly distributes one or several phases into another continuous phase, while normally these phases are immiscible. The high tangential velocity produced by the high speed rotor, and the strong kinetic energy produced by high frequency mechanical effect, can make materials subjected to intense mechanical and hydraulic shear, centrifugal squeezing, liquid layer friction, tearing, impacting, turbulence and other synthetic actions in narrow clearances between stator and rotor. Consequently, combined with mature processes and suitable additives, immiscible solid, liquid and gas phases can be dispersed and emulsified instantly. High frequency circulations will finally result in high quality and reliably consistent end products.

Working Steps

Step one: The high speed rotation of the rotor blades within the precision machined stator exerts a powerful suction, drawing liquid and solid materials in both direction fromthe top and bottom of the vessel into the centre of the stator–rotor configuration.

Step two: Centrifugal force then drives the materials towards the periphery and into the clearance between stator and rotor, where they are subjected to a milling, squeezing, crushing action for dispersing, emulsifying and homogenizing.

Step three: This is followed by intense hydraulic shear as the materials are forced, at hig hvelocity, out through the perforations in the stator and circulated into the main body of the mix.

Step four: The materials expelled from the stator are projected radially at high speed towards the sides of the mixing vessel. Meanwhile, fresh materials are continually drawn into the stator–rotor, maintaining the mixing cycle.

Hishear®

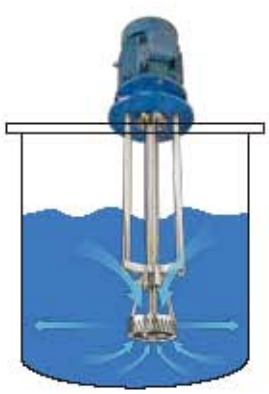
High Shear Dispersing Emulsifier

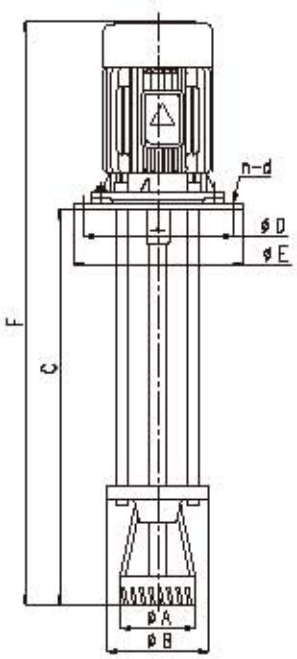
FA Series

Model-selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	B	C	D	E	F	n-d	Working Capacity(L)
FA90	1.5	2900	100	140	442	/	/	700	/	10-50
FA100	2.2	2900	120	160	650	285	320	975	8-φ16	50-100
FA120	4	2900	140	195	838	305	340	1215	8-φ18	100-300
FA140	7.5	2900	160	235	1130	335	370	1570	8-φ18	200-800
FA160	11	2900	185	235	1130	385	420	1675	8-φ18	300-1000
FA180	18.5	2900	200	280	1200	400	450	1780	8-φ20	500-1500
FA200	22	2900/1470	280	280	1200	400	450	1850	8-φ20	800-2000
FA240	37	2900/1470	310	340	1395	550	600	2140	12-φ20	1500-5000
FA270	55	1470	330	380	1500	600	640	2370	12-φ20	2000-8000

Please consult FLUKO for more models...





Remarks

- The maximum working capacities in above table are based on water as the medium;
- For high viscosity and high solid content materials, inline high shear dispersing emulsifiers are recommended to work together;
- For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;
- FLUKO reserves the rights to change the specifications without announcement.

Hishear®

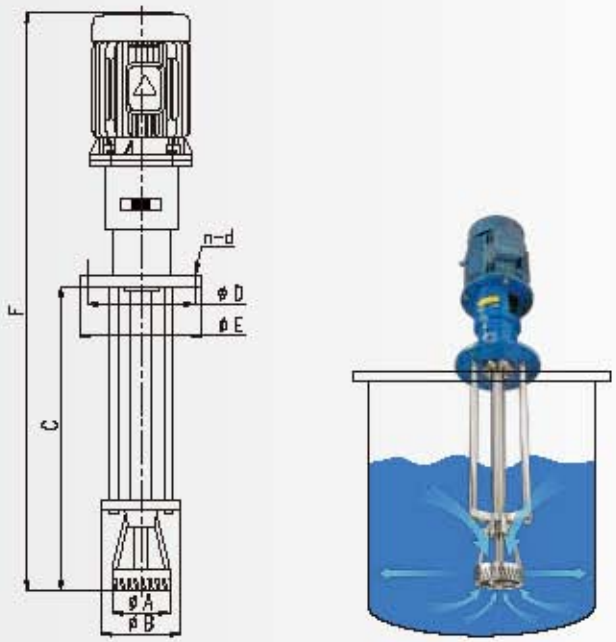
High Shear Dispersing Emulsifier

FAB Series

Model-selection Table

Model	Motor Power (KW)	Rotation Speed (rpm)	A	B	Standard/ Maximum C	D	E	F	n-d	Working Capacity (L)
FAB100	2.2	2900	120	160	650	215	265	1196	8-φ16	50-100
FAB120	4	2900	140	195	750	255	290	1395	8-φ16	100-300
FAB140	7.5	2900	160	235	833	300	350	1580	8-φ16	200-800
FAB160	11	2900	185	235	840/1700	300	350	1770	8-φ16	300-1500
FAB180	18.5	2900	200	280	1190/1950	360	415	2175	8-φ20	500-2000
FAB200	22	2900/1470	280	280	1200/2250	360	415	2250	8-φ20	800-4000
FAB220	30	2900/1470	300	320	1355/2700	445	485	2525	12-φ23	1000-5000
FAB240	37	1470	310	340	1395/2900	445	485	2585	12-φ23	1500-6000
FAB270	55	1470	330	380	1638/3200	600	640	2995	16-φ23	2000-10000
FAB290	75	1470	350	400	1648/3200	600	640	3050	16-φ23	3000-12000
FAB300	90	1470	360	410	1655	600	640	3120	16-φ23	4000-15000

Please consult FLUKO for more models...



Remarks

- The maximum working capacities in above table are based on water as the medium;
- For high viscosity and high solid content materials, inline high shear dispersing emulsifiers are recommended to work together;
- For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;
- FLUKO reserves the rights to change the specifications without announcement.

Hishear®

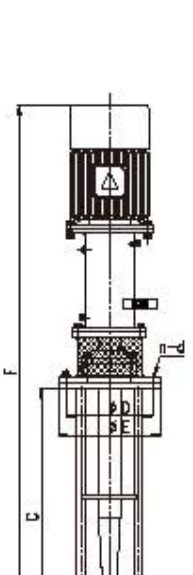
High Shear Dispersing Emulsifier

FAS Series

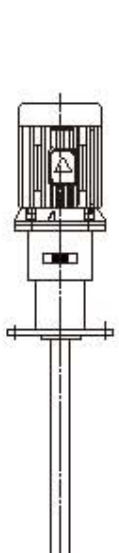
Model-selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	Standard/ Maximum C	D	E	F	n-d	Working Capacity (L)
FAS90	1.5	2900	105	430	/	200	705	/	5-50
FAS100	2.2	2900	120	740	215	265	1288	8-ϕ 16	50-100
FAS120	4	2900	140	863/1000	255	290	1508	8-ϕ 16	100-300
FAS140	7.5	2900/1470	160/235	1083/1700	300	350	1830	8-ϕ 16	200-800
FAS160	11	2900/1470	185/260	1110/1780	300	350	2040	8-ϕ 16	300-1000
FAS180	18.5	2900/1470	200/280	1520/1950	360	415	2505	8-ϕ 20	500-2000
FAS200	22	2900/1470	280	1540/2200	395	440	2590	12-ϕ 22	800-4000
FAS220	30	2900/1470	300	1715/2700	445	485	2885	12-ϕ 23	1000-5000
FAS240	37	1470	310	1775/2900	445	485	2965	12-ϕ 23	1500-6000
FAS270	55	1470	330	2038/3200	600	640	3395	16-ϕ 23	2000-10000
FAS290	75	1470	350	2068	600	640	3470	16-ϕ 23	3000-12000
FAS300	90	1470	360	2095	600	640	3560	16-ϕ 23	4000-15000

Please consult FLUKO for more models...



FAS with upper-seal



FAS with under-seal

Remarks

- The maximum working capacities in above table are based on water as the medium;
- For high viscosity and high solid content materials, inline high shear dispersing emulsifiers are recommended to work together;
- For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;
- FLUKO reserves the rights to change the specifications without announcement.

Hishear®

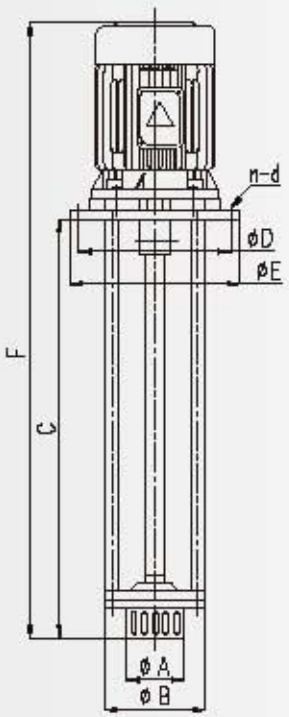
High Shear Dispersing Emulsifier

FM Series

Model-selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	B	C	D	E	F	n-d	Working Capacity (L)
FM100	2.2	2900	105	180	650	285	320	975	8-φ16	50-100
FM120	4	2900	115	200	838	305	340	1215	8-φ18	100-300
FM140	7.5	2900	130	225	1130	335	370	1570	8-φ18	200-800
FM160	11	2900	140	225	1130	385	420	1675	8-φ18	300-1000
FM180	18.5	2900	160	225	1200	400	450	1780	8-φ20	500-1500
FM200	22	2900/1470	220	300	1200	400	450	1850	8-φ20	800-2000
FM240	37	2900/1470	255	340	1395	550	600	2140	12-φ20	1500-5000
FM270	55	1470	305	435	1500	600	640	2370	16-φ23	2000-8000

Please consult FLUKO for more models...



Remarks

- The maximum working capacities in above table are based on water as the medium;
- For high viscosity and high solid content materials, inline high shear dispersing emulsifiers are recommended to work together;
- For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;
- FLUKO reserves the rights to change the specifications without announcement.

Hishear®

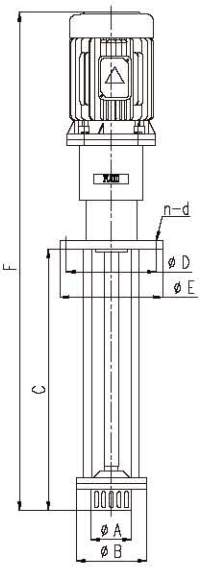
High Shear Dispersing Emulsifier

FMB Series

Model–selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	B	Standard/ Maximum C	D	E	F	n–d	Working Capacity (L)
FMB100	2.2	2900	105	160	650	215	265	1196	8–ϕ16	50–100
FMB120	4	2900	115	195	750	255	290	1395	8–ϕ16	100–300
FMB140	7.5	2900	130	235	833	300	350	1580	8–ϕ16	200–800
FMB160	11	2900	140	235	840/1970	300	350	1770	8–ϕ16	300–1000
FMB180	18.5	2900	160	280	1190/2200	360	415	2175	8–ϕ20	500–1500
FMB200	22	2900/1470	220	280	1200/2600	360	415	2250	8–ϕ20	800–2000
FMB240	37	2900/1470	255	340	1395/2900	445	485	2585	12–ϕ23	1500–5000
FMB270	55	1470	305	380	1638/3200	600	640	2995	16–ϕ23	2000–8000

Please consult FLUKO for more models...



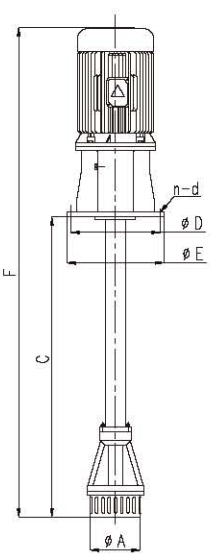
FMB

FMS Series

Model–selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	C	D	E	F	n–d	Working Capacity (L)
FMS100	2.2	2900	105	740	215	265	1286	8–ϕ16	50–100
FMS120	4	2900	115	863	255	290	1508	8–ϕ16	100–300
FMS140	7.5	2900	130	1083	300	350	1830	8–ϕ16	200–800
FMS160	11	2900	140	1110	300	350	2040	8–ϕ16	300–1000
FMS180	18.5	2900	160	1520	360	415	2505	8–ϕ20	500–1500
FMS200	22	2900/1470	220	1540	360	415	2590	8–ϕ20	800–2000
FMS240	37	2900/1470	255	1775	445	485	2965	12–ϕ23	1500–5000
FMS270	55	1470	305	2038	600	640	3395	16–ϕ23	2000–8000

Please consult FLUKO for more models...



FMS

Remarks

- The maximum working capacities in above table are based on water as the medium;
- For high viscosity and high solid content materials, inline high shear dispersing emulsifiers are recommended to work together;
- For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;
- FLUKO reserves the rights to change the specifications without announcement.

Hishear®

Inline High Shear Dispersing Emulsifier

G

M

F

In–line high shear dispersing emulsifier is high performance instrument for either in–line production or batch production of fine materials handling by circulation. In the narrow working chamber there are 1–3 stages of stator and rotor interlocked. High speed rotation of rotor causes intense axial suction force, which draws materials into the chamber. Materials are then subjected to dispersing, emulsifying and homogenizing, and finally particle size distribution becomes narrower, and products are more homogeneous.

FDC1

FDC1 is single stage in–line dispersing emulsifier, with hygienic design and all component surfaces are meticulously polished. In the working chamber there is one stage of stator and rotor. Materials are sucked into chamber axially and subjected to high shear dispersing, emulsifying and homogenizing by the stator and rotor, and are then ejected radially. It is applicable for hygienic conditions, such as production of pharmaceuticals, cosmetics and food. It complies with CIP cleaning requirements and can be customized according to GMP regulations.

FDC3

FDC3 is three–stage in–line dispersing emulsifier, with hygienic design and all component surfaces are meticulously polished.. All medium contact materials are SS316L, and inlet and outlet can be easily connected. In the working chamber there are three stages of stator and rotor. Materials are sucked into the chamber axially and subjected to high shear dispersing, emulsifying and homogenizing by three stages of stator and rotor, and are then ejected radially. In this way the products are more homogeneous. This machine is designed for hygienic conditions such as production of pharmaceuticals, cosmetics and food. It complies with CIP cleaning requirements and can be customized according to GMP regulations.

Hishear®

Inline High Shear Dispersing Emulsifier

Features & Performance

– Large working capacity; ideal for continuous industrial production;
– Narrow particle size distribution; very high homogeneity;
– High efficiency, saves both time and energy;
– Low noise profile and consistent smooth running;
– Effectively eliminates quality variations between batches;
– 100% of materials are dispersed and homogenized, without any dead corner;
– Short–distance, low–lift material transportation ensures efficient circulation;
– Designed for easy operation and maintenance;
– Automatic control can be arranged.

FDX1

FDX1 is single stage in–line dispersing emulsifier of general design. In the working chamber there is one stage of stator and rotor. Materials are sucked into working chamber axially and subjected to high shear dispersing, emulsifying and homogenizing by stator and rotor, and then ejected radially. It is applicable for non–hygienic conditions.

FDX3

FDX3 is a three–stage in–line dispersing emulsifier designed for general purposes. In the working chamber there are three stages of stator and rotor. Materials are sucked into the working chamber axially and subjected to high shear dispersing, emulsifying and homogenizing through the three stages of stator and rotor, and are then ejected radially. In this way the materials are more homogeneous. It is suitable for fine chemical, daily chemical and other non–hygienic applications.

Hishear®

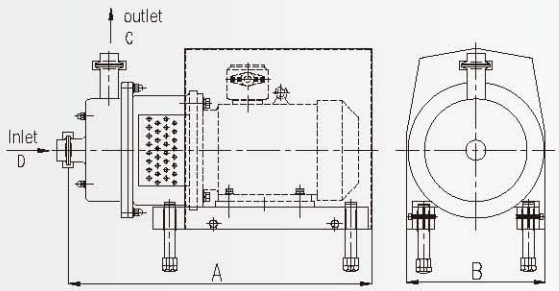
Inline High Shear Dispersing Emulsifier

FDC1 Series

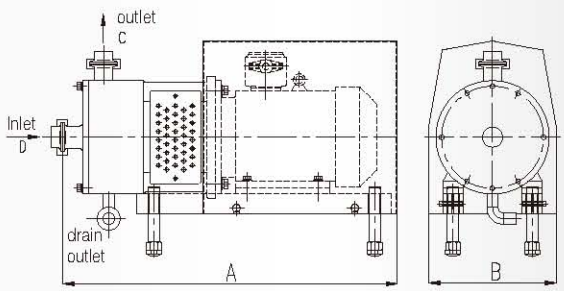
Model–selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	Inlet	Outlet	A	B	Flow rate Range (m^3/h)	Remarks
FDC1/100	2.2	2900	1.5"	1.25"	540	250	0–6	Standard design
FDC1/140	5.5	2900	2"	1.5"	690	320	0–8	
FDC1/165	7.5	2900	2"	1.5"	690	320	0–10	
FDC1/100	2.2	2900	1.5"	1.25"	600	250	0–6	Hygienic design
FDC1/140	5.5	2900	2"	1.5"	750	320	0–8	
FDC1/165	7.5	2900	2"	1.5"	750	320	0–10	
FDC1/180	11/15	2900	2.5"	2"	900	350	0–15	
FDC1/185	15/18.5	2900	2.5"	2"	900	350	0–20	
FDC1/200	22	2900/1470	2.5"	2"	1050	490	0–25	
FDC1/210	30	2900/1470	3.5"	2.5"	1200	540	0–30	
FDC1/230	45	2900/1470	4"	3"	1500	680	0–50	

Please consult FLUKO for more models...



Standard design



Hygienic design

Remarks

– The flow rate ranges in above table are based on water as the medium, outlet pressure for all models are not more than 0.15MPa;

– Should circulations are required, it is recommended to use a batch high shear emulsifier in tank working with the inline one;

– For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;

– A transfer pump with moderate flow rate should be connected in front of inline high shear emulsifier, when the materials can not flow well, and the pump pressure should be not more than 0.3MPa;

– FLUKO reserves the rights to change the specifications without announcement.

Hishear®

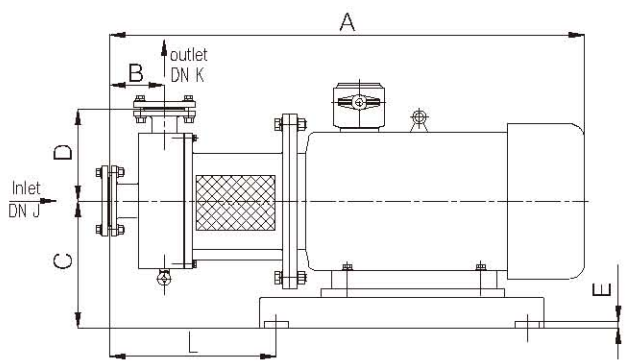
Inline High Shear Dispersing Emulsifier

FDX1 Series

Model–selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	B	C	D	E	J	K	L	Flow Rate Range (m^3/h)
FDX1/100	2.2	2900	575	90	180	150	20	40	32	286	0–3
FDX1/140	5.5	2900	743	136	224	182	25	50	40	357	0–5
FDX1/165	7.5	2900	743	136	224	182	25	50	40	357	0–8
FDX1/180	11	2900	900	120	250	210	25	65	50	420	0–12
FDX1/185	15	2900	900	120	250	210	25	65	50	420	0–18
FDX1/200	22	2900/1470	970	124	270	210	15	65	50	380	0–25
FDX1/210	30	2900/1470	1110	150	325	230	15	80	65	487	0–35
FDX1/230	45	2900/1470	1485	150	325	240	15	100/65	80/50	260	0–45
FDX1/245	55	1470	1800	150	350	250	15	100	80	280	0–75
FDX1/260	75	1470	1920	180	380	260	15	125	100	340	0–90
FDX1/280	90	1470	2050	180	380	270	15	125	100	350	0–110
FDX1/290	132	1470	2370	200	415	285	15	150	125	360	0–130
FDX1/300	160	1470	2495	220	415	295	20	175	150	380	0–140
FDX1/360	185	1470	2500	220	415	305	20	175	150	385	0–160
FDX1/380	200	1470	2510	220	415	315	25	175	150	390	0–180
FDX1/400	250	1470	2535	220	415	325	25	200	175	400	0–200

Please consult FLUKO for more models...



Remarks

– The flow rate ranges in above table are based on water as the medium, outlet pressure for all models are not more than 0.15MPa;

– Should circulations are required, it is recommended to use a batch high shear emulsifier in tank working with the inline one;

– For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;

– A transfer pump with moderate flow rate should be connected in front of inline high shear emulsifier, when the materials can not flow well, and the pump pressure should be not more than 0.3MPa;

– FLUKO reserves the rights to change the specifications without announcement.

Hishear®

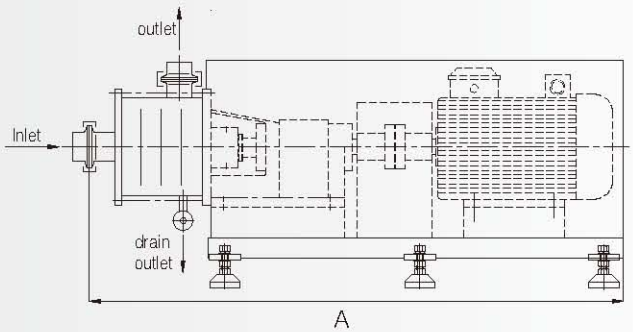
Inline High Shear Dispersing Emulsifier

FDC3 Series

Model–selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	Inlet	Outlet	A	Flow Rate Range (m^3/h)
FDC3/100	7.5	2900	1.5"	1.25"	1070	0–8
FDC3/120	11	2900	2.5"	2"	1465	0–10
FDC3/140	15	2900	2.5"	2"	1430	0–12
FDC3/165	22	2900/1470	3"	2.5"	1800	0–20
FDC3/200	37	2900/1470	3"	2.5"	1850	0–30
FDC3/220	55	1470	3.5"	3"	2000	0–40
FDC3/240	75	1470	4"	3.5"	2000	0–60
FDC3/260	90	1470	4"	3.5"	2500	0–80

Please consult FLUKO for more models...



Remarks

– The flow rate ranges in above table are based on water as the medium, outlet pressure for all models are not more than 0.15MPa;

– Should circulations are required, it is recommended to use a batch high shear emulsifier in tank working with the inline one;

– For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;

– A transfer pump with moderate flow rate should be connected in front of inline high shear emulsifier, when the materials can not flow well, and the pump pressure should be not more than 0.3MPa;

– FLUKO reserves the rights to change the specifications without announcement.

Hishear®

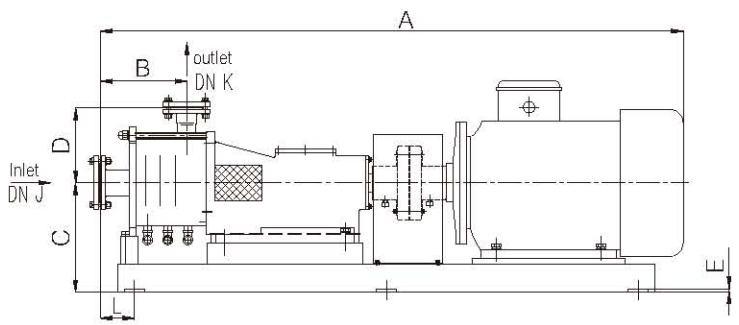
Inline High Shear Dispersing Emulsifier

FDX3 Series

Model–selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	B	C	D	E	J	K	L	Flow Rate Range (m^3/h)
FDX3/100	7.5	2900	1070	230	232	172	10	50	40	340	0–8
FDX3/120	11	2900	1405	236	293	178	12	65	50	349	0–12
FDX3/140	15	2900	1430	236	293	178	12	65	50	349	0–18
FDX3/165	22	2900/1470	1610	267	310	242	12	80	65	148	0–22
FDX3/200	37	2900/1470	1840	315	300	265	12	100	80	444	0–30
FDX3/220	55	2900/1470	2025	308	380	330	16	100	80	473	0–40
FDX3/240	75	1470	2100	308	380	330	16	100	80	473	0–55
FDX3/260	90	1470	2135	332	380	360	16	125	100	516	0–65
FDX3/300	110	1470	2375	326	425	345	20	125	100	499	0–80
FDX3/360	132	1470	2585	426	425	375	20	150	125	600	0–100
FDX3/380	160	1470	2640	372	425	390	20	150	125	559	0–120
FDX3/420	200	1470	2775	490	425	410	20	250	200	736	0–155

Please consult FLUKO for more models...



Remarks

– The flow rate ranges in above table are based on water as the medium, outlet pressure for all models are not more than 0.15MPa;

– Should circulations are required, it is recommended to use a batch high shear emulsifier in tank working with the inline one;

– For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;

– A transfer pump with moderate flow rate should be connected in front of inline high shear emulsifier, when the materials can not flow well, and the pump pressure should be not more than 0.3MPa;

– FLUKO reserves the rights to change the specifications without announcement.

Hishear®

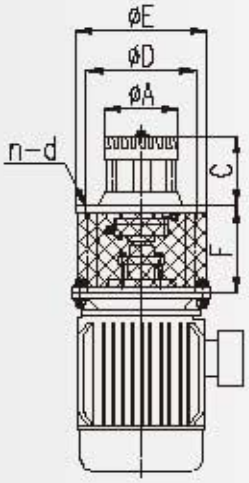
Inline High Shear Dispersing Emulsifier

FAE Series

Model-selection Table

Model	Motor Power (KW)	Rotation Speed (rpm)	A	C	D	E	F	n-d	Working Capacity(L)
FAE90	1.5	2900	105	100	170	205	/	6-M12	5-50
FAE100	2.2	2900	120	150	210	250	168	8-M16	30-100
FAE120	4	2900	140	150	235	285	190	8-M20	100-300
FAE140	7.5	2900	160	150	280	320	190	8-M20	200-1000
FAE160	11	2900	180	160	320	370	200	8-M20	300-2000
FAE180	18.5	2900	180	180	320	370	240	8-M20	800-3000
FAE200	22	2900	220	180	350	395	240	8-M20	800-4000
FAE220	30	2900/1470	280	190	550	595	300	16-M20	1000-5000
FAE240	37	2900/1470	280	190	550	595	300	16-M20	1500-6000

Please consult FLUKO for more models...



Remarks

- The maximum working capacities in above table are based on water as the medium;
- For high viscosity and high solid content materials, inline high shear dispersing emulsifiers are recommended to work together;
- For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;
- FLUKO reserves the rights to change the specifications without announcement.

Hishear®

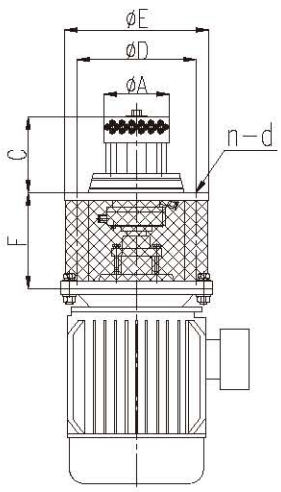
Inline High Shear Dispersing Emulsifier

FME Series

Model-selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	C	D	E	F	n-d	Working Capacity (L)
FME90	1.5	2900	105	100	170	205	/	6-M12	5-50
FME100	2.2	2900	120	150	210	250	168	8-M16	30-100
FME120	4	2900	140	150	235	285	190	8-M20	100-300
FME140	7.5	2900	160	150	280	320	190	8-M20	200-1000
FME160	11	2900	180	160	320	370	200	8-M20	300-2000
FME180	18.5	2900	180	180	320	370	240	8-M20	800-3000
FME200	22	2900	220	180	350	395	240	8-M20	800-4000
FME220	30	2900/1470	280	190	550	595	300	16-M20	1000-5000
FME240	37	2900/1470	280	190	550	595	300	16-M20	1500-6000

Please consult FLUKO for more models...



Remarks

- The maximum working capacities in above table are based on water as the medium;
- For high viscosity and high solid content materials, inline high shear dispersing emulsifiers are recommended to work together;
- For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;
- FLUKO reserves the rights to change the specifications without announcement.

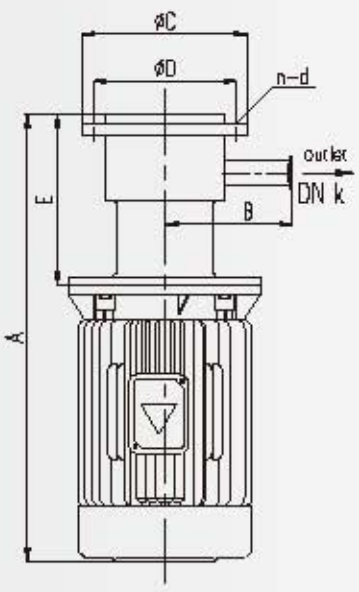
Hishear®

Bottom Type High Shear Dispersing Emulsifier

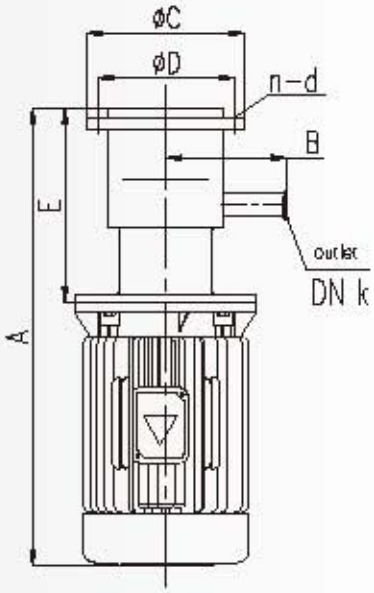
FDE Series

Installed at the bottom of the tank, the FDE high shear dispersing emulsifiers have a broad range of working capacities. The especially designed seal structure prevents materials from leakage. There are interior and exterior circulation ways optional.

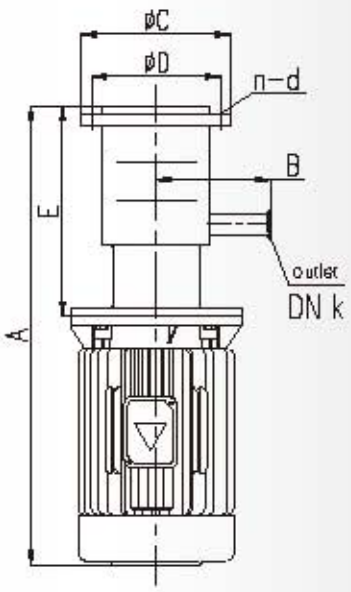
This equipment is suitable for materials of varying viscosities and different processes, especially dispersing, emulsifying, homogenizing and the mixing of creams, emulsions and suspensions.



FDE1



FDE2



FDE3

Hishear®

Bottom Type High Shear Dispersing Emulsifier

FDE Series

Model–selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	B	C	D	E	K(DN)	n–d	Flow Rate Range (m^3/h)(H_2O)
FDE1/100	2.2	2900	575	90	205	170	285	1.25″	4–φ18	0–3
FDE1/140	5.5	2900	840	200	260	225	405	1.5″	8–φ18	0–5
FDE1/165	7.5	2900	840	200	260	225	405	1.5″	8–φ18	0–8
FDE1/180	11	2900	950	206	290	255	460	2.5″	8–φ18	0–12
FDE1/185	15	2900	1040	230	290	255	505	2.5″	8–φ18	0–18
FDE1/200	22	2900	1170	237	315	280	570	2.5″	8–φ18	0–25
FDE1/210	37	2900/1470	1340	278	315	280	650	3.5″	8–φ18	0–35
FDE1/220	45	2900/1470	1380	278	340	305	675	3.5″	8–φ18	0–50
FDE1/250	55	2900/1470	1550	278	370	335	760	3.5″	12–φ18	0–75
FDE1/280	75	2900/1470	1640	278	435	395	805	3.5″	12–φ23	0–90
FDE2/120	7.5	2900	870	200	260	225	435	1.5″	8–φ18	0–8
FDE2/140	11	2900	980	206	290	255	490	2.5″	8–φ18	0–12
FDE2/160	15	2900	1070	230	290	255	535	2.5″	8–φ18	0–18
FDE2/180	22	2900	1200	237	315	280	600	2.5″	8–φ18	0–22
FDE2/185	37	2900/1470	1370	278	315	280	680	3.5″	8–φ18	0–30
FDE2/195	45	2900/1470	1410	278	340	305	705	3.5″	8–φ18	0–40
FDE2/260	55	1470	1580	278	370	335	790	3.5″	12–φ18	0–40
FDE2/270	75	1470	1670	278	425	395	835	3.5″	12–φ23	0–55
FDE3/120	7.5	2900	900	200	260	225	465	1.5″	8–φ18	0–8
FDE3/140	11	2900	1010	206	290	255	520	2.5″	8–φ18	0–12
FDE3/160	15	2900	1100	230	290	255	565	2.5″	8–φ18	0–18
FDE3/180	22	2900	1230	237	315	280	630	2.5″	8–φ18	0–22
FDE3/185	37	2900/1470	1400	278	315	280	710	3.5″	8–φ18	0–30
FDE3/195	45	2900/1470	1440	278	340	305	735	3.5″	8–φ18	0–40
FDE3/260	55	1470	1610	278	370	335	820	3.5″	12–φ18	0–40
FDE3/270	75	1470	1700	278	435	395	865	3.5″	12–φ23	0–55

Please consult FLUKO for more models...

Remarks

– The flow rate ranges in above table are based on water as the medium, outlet pressure for all models are not more than 0.15MPa;

– Should circulations are required, it is recommended to use a batch high shear emulsifier in tank working with the inline one;

– For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;

– A transfer pump with moderate flow rate should be connected in front of inline high shear emulsifier, when the materials can not flow well, and the pump pressure should be not more than 0.3MPa;

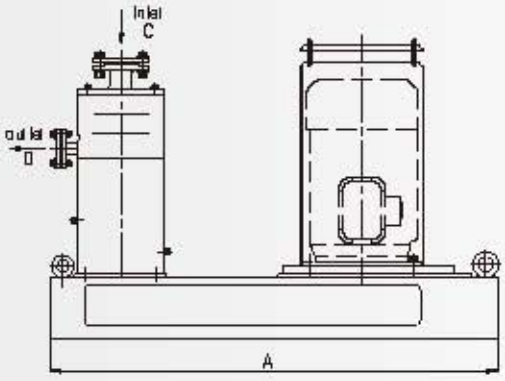
– FLUKO reserves the rights to change the specifications without announcement.

Hishear®

Inline High Shear Dispersing Emulsifier

FDH Series

The FDH series vertical design facilitates easier materials–suction and discharging, as well as dramatic noise reduction. Options include a variety of dispersal tools from single to multi stages in the working chamber, and it is mainly used for the production of micro–emulsions and super fine suspensions. Usually the three stages of stators and rotors work together and the high shear forces produce finer particles, and more refined particle size distribution as well as a more constant final mixture. The three tool options can easily be changed for different applications. Regardless of the size in this series, the rotation speed and shear rate remain the same. This greatly facilitates scale up for mass production. All equipment is standardized for CIP/SIP cleaning.



Model–selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	C(DN)	D(DN)	Flow Rate Range (m³/h)
FDH3/100	7.5	2900	1200	50	40	0–8
FDH3/120	11	2900	1300	65	50	0–12
FDH3/140	15	2900	1300	65	50	0–18
FDH3/165	22	2900	according to practical conditions	80	85	0–22
FDH3/200	37	2900	according to practical conditions	100	80	0–30
FDH3/220	55	1470	according to practical conditions	100	80	0–40
FDH3/240	75	1470	according to practical conditions	100	80	0–55
FDH3/260	90	1470	according to practical conditions	125	100	0–65
FDH3/300	110	1470	according to practical conditions	125	100	0–80
FDH3/360	132	1470	according to practical conditions	150	125	0–100
FDH3/380	160	1470	according to practical conditions	150	125	0–120
FDH3/420	200	1470	according to practical conditions	250	200	0–155

Please consult FLUKO for more models...

Remarks

– The flow rate ranges in above table are based on water as the medium, outlet pressure for all models are not more than 0.15MPa;
– Should circulations are required, it is recommended to use a batch high shear emulsifier in tank working with the inline one;
– For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;
– A transfer pump with moderate flow rate should be connected in front of inline high shear emulsifier, when the materials can not flow well, and the pump pressure should be not more than 0.3MPa;
– FLUKO reserves the rights to change the specifications without announcement.

Hishear®

Quick-Dosing Mixing System

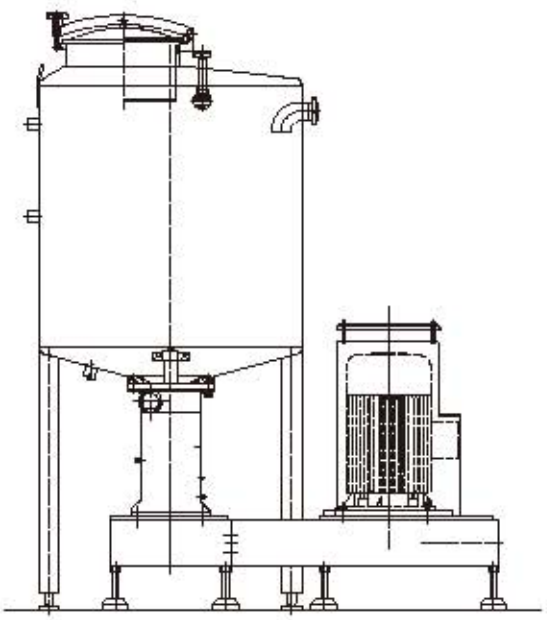
FDH-T Series

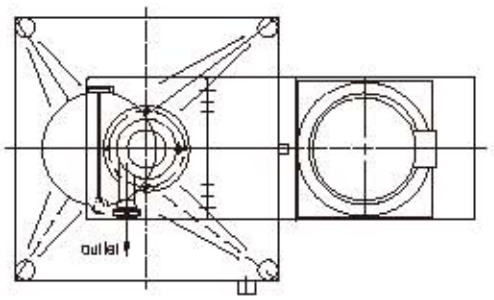
The rapid–dosing mixing system is suitable for various vessels. It rapidly draws floating powder into the lowest high shearing zone, and immediately completes the dissolving and dispersing process. Thus the efficiency is extremely high. The introduction of high, middle and low liquid level gauges makes it well adapted for automatic in–line dosing. The system is applicable for powder dissolving and dispersing, gel resolving, pulp handling and other dosing processes.

Model–selection Table

Model	Motor Power (kW)	Working Capacity (m^3)	Flow Rate Range (m^3/h)
FDH1–0.5T	7.5–18.5	0.5	10–20
FDH1–1T	22–30	1	20–30
FDH1–2T	37–45	2	30–40

Please consult FLUKO for more models...





Remarks

– The flow rate ranges in above table are based on water as the medium, outlet pressure for all models are not more than 0.15MPa;
– Should circulations are required, it is recommended to use a batch high shear emulsifier in tank working with the inline one;
– For special working conditions, such as high temperature and pressure, flammable, explosive or corrosive conditions, customers should provide detailed data;
– A transfer pump with moderate flow rate should be connected in front of inline high shear emulsifier, when the materials can not flow well, and the pump pressure should be not more than 0.3MPa;
– FLUKO reserves the rights to change the specifications without announcement.

Jetmixers® Dispersing Mixer

Perfect Vertical Circulation

When simple mixing is insufficient, and the high shear force generated by stator/rotor system is too strong, the Jetmixer will be the best choice. It exerts powerful macro and micro mixing effects, and meanwhile disperses materials to the full, without assistance from extra high shear equipment. The Jetmixer provides ideal dispersing and mixing energy and can meet requirements of different processes. The operation is quite easy.

Applications

Sugar dissolving, powder dissolving, gel resolving, suspending, reaction accelerating, dispersing, mixing and depolymerizing of nano-materials and light powders.

Working principle

A liquid stream driven by the high speed rotation of rotor, combined with flow guide chamber effect, ensure strong liquid circulation in the whole tank. On the other hand, high speed rotation of rotor can also produce some shear turbulence required by micro mixing, and the micro processed liquid will then be dispersed within the whole stream to every corner of the tank. Differentiating it from conventional agitators, the Jetmixers can fully disperse and mix all liquids in the tank without dead corners.

Features & Performance

- Whole vertical liquid stream dispersing and mixing, negligible air infiltration;
- No vortex in the stream, and no sediment in the tank bottom;
- The X type dispersing tool generates high shear force to reduce particle sizes;
- Highly efficient mixing and emulsifying facilitates suspension preparation;
- Applicable for efficient dosing, liquid-liquid dispersing and solid-liquid dispersing;
- Enables super-saturation and accelerates the reaction rate.

top-entry type

side-entry type

bottom-entry type

Jetmixers®

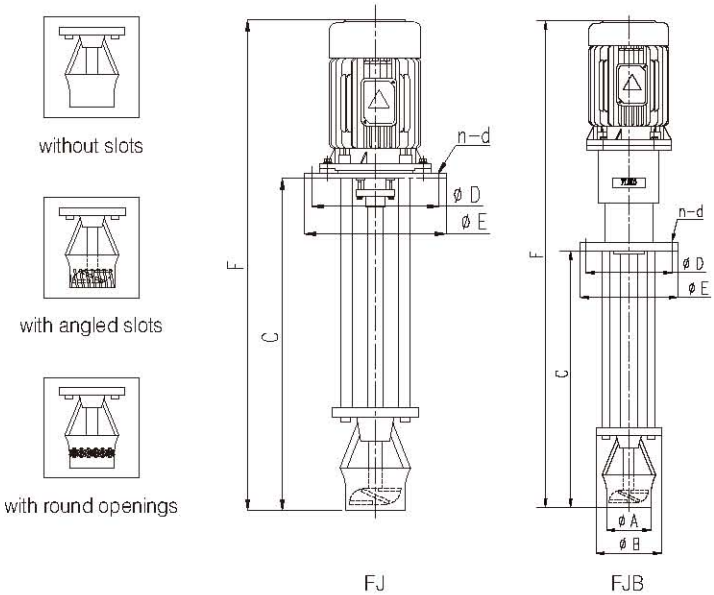
Batch Jetmixer, Dispersing Mixer

FJ/FJB/FJB-X Series

Model-selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	B	Standard/ Maximum C	D	E	F	n-d	Working Capacity (L)
FJ90 / FJB90 / FJB90-X	1.5	2900	100	120	430/530	165	200	730	4-ϕ14	10-70
FJ100 / FJB100 / FJB100-X	2.2	2900	110	160	650	215	265	1196	8-ϕ16	50-150
FJ120 / FJB120 / FJB120-X	4	2900	130	195	750/1000	255	290	1395	8-ϕ16	100-400
FJ140 / FJB140 / FJB140-X	7.5	2900/1470	160/192	235	833/1100	300	350	1580	8-ϕ16	200-1000
FJB160 / FJB160-X	11	2900/1470	170/217	235	840/1700	300	350	1770	8-ϕ16	300-1500
FJB180 / FJB180-X	18.5	2900/1470	260	300	1190/1950	445	485	2175	12-ϕ23	500-2000
FJB200 / FJB200-X	22	2900/1470	280	320	1200/1950	445	485	2250	12-ϕ23	800-2500
FJB220 / FJB220-X	30	2900/1470	300	340	1355/2700	445	485	2525	12-ϕ23	1000-3500
FJB240 / FJB240-X	37	2900/1470	320	360	1395/2700	445	485	2585	12-ϕ23	1500-6000
FJB270 / FJB270-X	55	1470	360	480	1638	600	640	2995	16-ϕ23	2000-10000
FJB290 / FJB290-X	75	1470	380	500	1648	600	640	3050	16-ϕ23	3000-12000
FJB300 / FJB300-X	90	1470	410	520	1655	600	640	3120	16-ϕ23	4000-15000
FJB320 / FJB320-X	110	980	430	550	1680	650	755	3325	16-ϕ23	5000-17000
FJB350 / FJB350-X	132	980	450	580	2000	650	755	3760	16-ϕ23	6000-18000

Please consult FLUKO for the complete model range...



Remarks

- The maximum working capacities in the above table are assume that the medium is water;
- For high viscosity and high solid content materials, it is recommended that inline high shear dispersing emulsifiers work together;
- In case of special working situations, such as high temperatures or pressures, or flammable, explosive or corrosive conditions, please provide detailed data for our assessment;
- FLUKO reserves the right to change the specifications without notice.

Jetmixers®

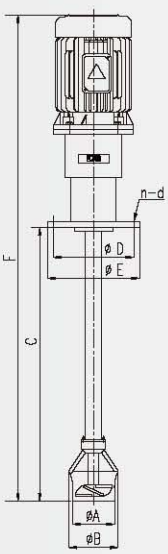
Batch Jetmixer Dispersing Mixer

FJS/FJS-X Series

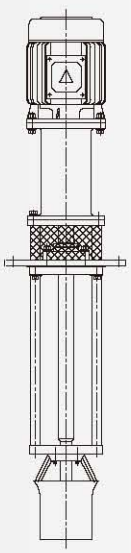
Model-selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	B	Standard/ Maximum C	D	E	F	n-d	Working Capacity (L)
FJS90 / FJS90-X	1.5	2900	100	120	430/670	165	200	705	4-ϕ14	10-70
FJS100 / FJS100-X	2.2	2900	110	140	740	215	265	1286	8-ϕ16	50-150
FJS120 / FJS120-X	4	2900/1470	130/166	160/230	863	255	290	1508	8-ϕ16	100-400
FJS140 / FJS140-X	7.5	2900/1470	160/192	180	1083	300	350	1830	8-ϕ16	200-1000
FJS160 / FJS160-X	11	2900/1470	170/217	210	1110/2100	300	350	2040	8-ϕ16	300-1500
FJS180 / FJS180-X	18.5	2900/1470	260	300	1520/1800	445	485	2505	12-ϕ23	500-2000
FJS200 / FJS200-X	22	2900/1470	280	320	1540/2350	445	485	2590	12-ϕ23	800-3500
FJS220 / FJS220-X	30	2900/1470	300	340	1715	445	485	2885	12-ϕ23	1000-5000
FJS240 / FJS240-X	37	1470	320	360	1775	445	485	2965	12-ϕ23	1500-6000
FJS270 / FJS270-X	55	1470	360	480	2038	600	640	3395	16-ϕ23	2000-10000
FJS290 / FJS290-X	75	1470	380	500	2068	600	640	3470	16-ϕ23	3000-12000
FJS300 / FJS300-X	90	1470	410	520	2095	600	640	3560	16-ϕ23	4000-15000
FJS320 / FJS320-X	110	980	430	550	2160	650	755	3805	16-ϕ23	5000-17000
FJS350 / FJS350-X	132	980	450	580	2500	650	755	4260	16-ϕ23	6000-18000

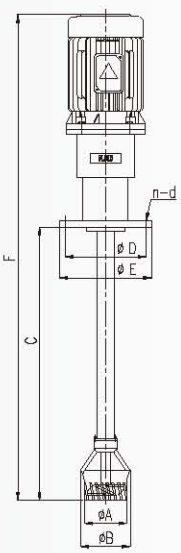
Please consult FLUKO for more models...



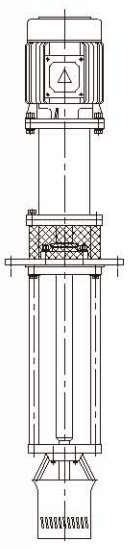
FJS with under-seal



FJS with upper-seal



FJS-X with under-seal



FJS-X with upper-seal

Remarks

- The maximum working capacities in the above table are assume that the medium is water;
- For high viscosity and high solid content materials, it is recommended that inline high shear dispersing emulsifiers work together;
- In case of special working situations, such as high temperatures or pressures, or flammable, explosive or corrosive conditions, please provide detailed data for our assessment;
- FLUKO reserves the right to change the specifications without notice.

Jetmixers®

Batch Jetmixer Dispersing Mixer

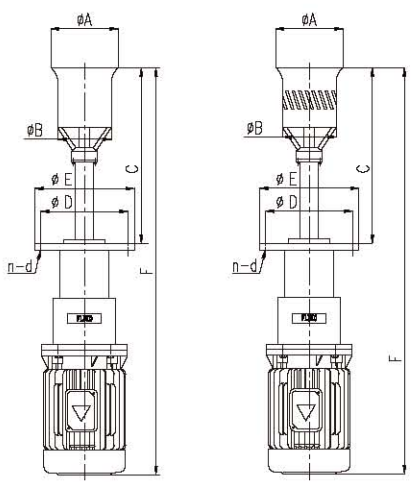
FJE/FJE-X Series

FJE bottom-entry Jetmixers are usually used for large tanks, and effectively control power consumption within the requisite range. The bottom-entry installation is appropriate for virtually any tank shape. However side-entry type Jetmixers should be customized to take account of the tank dimensions and working conditions.

Model-selection Table

Model	Motor Power (kW)	Rotation Speed (rpm)	A	B	C	D	E	F	n-d	Working Capacity (L)
FJE90 / FJE90-X	1.5	2900	120	100	170	205	205	795	4-ϕ18	10-70
FJE100 / FJE100-X	2.2	2900	140	110	200	235	235	870	8-ϕ18	50-150
FJE120 / FJE120-X	4	2900	160	130	225	260	260	1080	8-ϕ18	100-400
FJE140 / FJE140-X	7.5	2900	180	160	255	290	290	1305	8-ϕ18	200-1000
FJE160 / FJE160-X	11	2900	210	170	255	290	290	1470	8-ϕ18	300-1400
FJE180 / FJE180-X	18.5	2900/1470	300	260	335	370	370	1680	12-ϕ18	500-1800
FJE200 / FJE200-X	22	2900/1470	320	280	395	435	435	1800	12-ϕ23	800-2500
FJE220 / FJE220-X	30	2900/1470	340	300	395	435	435	1995	12-ϕ23	1000-3500
FJE240 / FJE240-X	37	2900/1470	360	320	395	435	435	2040	12-ϕ23	1500-6000
FJE270 / FJE270-X	55	1470	480	360	550	590	590	2115	16-ϕ23	2000-10000
FJE290 / FJE290-X	75	1470	500	380	550	590	590	2700	16-ϕ23	3000-12000
FJE300 / FJE300-X	90	1470	520	410	550	590	590	2700	16-ϕ23	4000-15000
FJE320 / FJE320-X	110	980	550	430	600	640	640	3150	16-ϕ23	5000-17000
FJE350 / FJE350-X	132	980	580	450	705	755	755	3150	20-ϕ25	6000-18000

Please consult FLUKO for more models...



FJE standard FJE-X standard

Remarks

- The maximum working capacities in the above table are assume that the medium is water;
- For high viscosity and high solid content materials, it is recommended that inline high shear dispersing emulsifiers work together;
- In case of special working situations, such as high temperatures or pressures, or flammable, explosive or corrosive conditions, please provide detailed data for our assessment;
- FLUKO reserves the right to change the specifications without notice.

PLM® PLM Powder & Liquid Mixing System

Dust elimination....

PLM (Powder & Liquid Mixers) are designed to optimally and efficiently mix and emulsify powder with liquid in the shortest period of time. The high speed rotation of the rotor creates a vacuum in working chamber, thus introducing powder quickly and mixing it into a smooth liquid stream, without any agglomeration. Due to the high shear force of the stator–rotor system, liquid and powder are fully distributed and mixed. The PLM system is especially suitable for large capacity processing, high efficient mixing, dust free operation and prevention of lumping in the interior walls of containers and pipes

Working Principle

The high speed rotation of the rotor generates vacuum and quickly sucks powder into the working chamber, and powder is thus evenly distributed into the fast liquid stream. As powder is completely absorbed into the liquid instantly at the outset, no lumping develops in the mixture and no skinning in the shaft or interior wall of the container. This is different from the traditional process, which easily results in hard skinning. Thus the PLM system dramatically enhances product quality. As a vacuum is created by the liquid stream, powder flows continuously into the liquid, and auxiliary environmental protection devices fitted in traditional processes are unnecessary.

More and more mixing processes call for powder and liquid dispersing, and this cannot be satisfactorily completed by traditional agitators. During this type of production problems invariably accompany the process such as: dust, lumping, skinning, micro dust loss, environmental pollution, and occupational health for workers.

Quick dosing

Powder can be sucked very quickly with maximum speed of 200kg/min, and different kinds of powder can be dispersed quickly and evenly.

Quality enhancement

In inline processes easily and uniformly dissolve CMC, xanthan gum and other gel products of high viscosity and expansibility.

Energy saving

Powder can be dissolved in chilled water to preserve nutrient substances and avoid bacterial growth.

Sanitation design

Convenient cleaning, CIP/SIP availability and compliance with international sanitation standards and regulations;

Process improvement

Dust-free feeding, avoidance of expansive powder agglomeration and therefore no risk of lumping;

Cost saving

The equipment can be integrated with modular systems, eliminating the need for multiple containers, pipelines, valves and agitators, and thus saving equipment investment and production cost.

Applications

Reconstructed milk, fruit milk, yoghurt, in-line dosing and dissolving;

Sugar supersaturating;

CMC, carrageenan and pectin dissolving;

Grain/water, starch/water in-line dispersing and homogenizing;

Concentrated tea powder, concentrated fruit juice quick dosing;

Nano-materials dispersing and mixing, such as silica, titanium, betonite, bentonite, kaolin, talcum powder, lime powder etc.;

PLM®

PLM Powder & Liquid Mixing System

PJ/PM Series

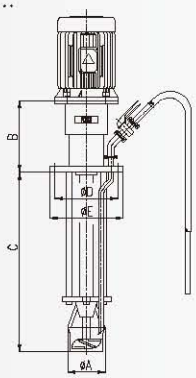
Specially designed generators create axial flow, resulting in a strong vertical convective stream. Then radial turbulences quickly disperse powder or sticky substances, and in the meantime minimize air infiltration. The dust-free inlet hose can suck light powder directly from bags or containers into the mixing tank, without lifting or dumping.

Model-selection Table

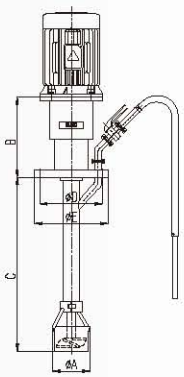
Model	Motor Power (kW)	Rotation Speed (rpm)	A	B	C size	D	E	n-d	Max. Powder Suction Rate(kg/min)	Hose Size	Working Capacity (L)
PJ90	2.2	2900	120	150	430	/	/	/	4	/	50-70
PJ100	2.2	2900	135	260	650	/	/	8-ϕ16	6	/	50-150
PJ120	4	2900	160	310	750	285	320	8-ϕ16	8	1"	100-400
PJ140	7.5	2900	180	359	833	300	350	8-ϕ16	12	1"	200-1000
PJ160	11	2900	195	350	840	370	420	8-ϕ16	20	1"	300-1400
PJ180	18.5	1470	300	/	1190	/	/	/	26	1.5"	500-1800
PJ20	22	1470	300	400	1200	460	500	12-ϕ23	/	1.5"	800-2500

Model	Motor Power (kW)	Rotation Speed (rpm)	A	B	C	D	E	F	n-d	Working Capacity (L)
PM100	2.2	2900	105	180	650	285	320	975	8-ϕ16	50-100
PM120	4	2900	115	200	838	305	340	1215	8-ϕ18	100-300
PM140	7.5	2900	130	225	1130	335	370	1570	8-ϕ18	200-800
PM160	11	2900	140	225	1130	385	420	1675	8-ϕ18	300-1000
PM180	18.5	2900	160	225	1200	400	450	1780	8-ϕ20	500-1500
PM200	22	1470	220	300	1200	400	450	1850	8-ϕ20	800-2000
PM240	37	1470	255	340	1395	550	600	2140	12-ϕ20	1500-5000
PM270	55	1470	305	435	1500	600	640	2370	16-ϕ23	2000-8000

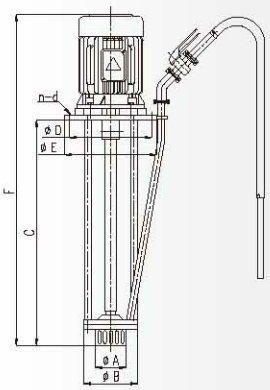
Please consult FLUKO for more models...



PJ under atmospheric pressure



PJ under vacuum or pressurized condition



PM

Remarks

- The maximum working capacities in above table are based on medium as water;
- Powder suction rate depends on powder characteristics (such as particle size, swellability and liquidity etc.); if uncertain, please provide samples or make experiments for model selection;
- For special working conditions, please provide detailed data to FLUKO engineers for working out special solutions;
- FLUKO reserves the rights to change the specifications without announcement.

PLM®

PLM Powder & Liquid Mixing System

PDH-XT/PD-XT Series

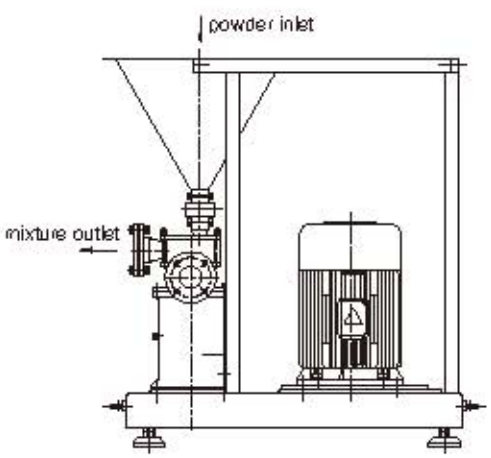
Rapidly disperses insoluble powder into liquid and simultaneously minimizing air infiltration. The specially designed stator/rotor structure subjects powder to a strong high shear effect, and hydrates in advance, eliminating the risk of a fisheye side effect. The risk of excessive effect on shear sensitive products is eliminated. This equipment also undertakes circulations if necessary.

Model-selection Table

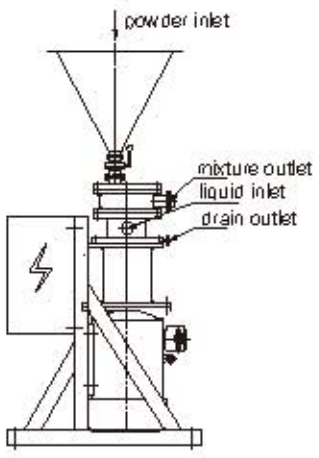
Model	Motor Power (KW)	Rotation Speed (rpm)	Flow Rate Range(m^3/h)	Max. Powder Suction Rate(kg/min)	Inlet/Outlet size
PDH 100-XT	3	2900	7	2	DN20/DN20
PDH 120-XT	4	2900	10	4	DN25/DN25
PDH 140-XT	7.5	2900	15	6	DN32/DN32
PDH 165-XT	11	2900	20	6	DN40/DN40
PDH 180-XT	18.5	2900	25	6	DN50/DN50
PDH 200-XT	22	2900	32	8	DN65/DN65
PDH 210-XT	30	2900	40	10	DN65/DN65
PD100-XT	11/14	1470/2900	0-12	3	DN50/DN50
PD120-XT	18.5/22	1470/2900	0-25	5	DN65/DN65
PD140-XT	26/30	1470/2900	0-35	15	DN80/DN80
PD165-XT	32/37	1470/2900	0-50	25	DN100/DN100
PD200-XT	37/45	1470/2900	0-65	35	DN120/DN120
PD300-XT	45/52	1470/2900	0-85	45	DN150/DN150

Please consult FLUKO for more models...

PDH-XT



PDH-XT



PD-XT


PD-XT

Remarks

- The maximum working capacities in above table are based on medium as water;
- Powder suction rate depends on powder characteristics (such as particle size, swellability and liquidity etc.); if uncertain, please provide samples or make experiments for model selection;
- For special working conditions, please provide detailed data to FLUKO engineers for working out special solutions;
- FLUKO reserves the rights to change the specifications without announcement.

PLM®

PLM Powder & Liquid Mixing System

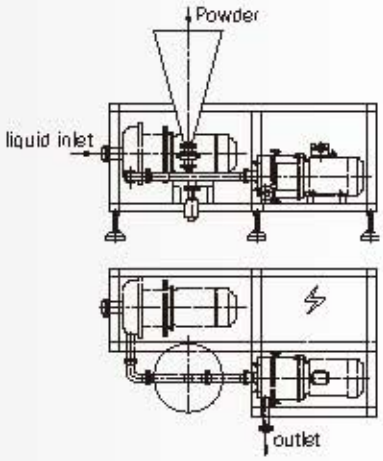
A single piece of equipment is sufficient to complete all process steps: with a dust-free hose or a hopper, it can very quickly execute powder/liquid feeding, wetting, dispersing and mixing, the risk of lumping is eliminated. It not only saturates the powder, but at the same time the equipment disperses it into liquid under vacuum, avoiding mass air infiltration. The advantages are: no lumping; better reaction effect; higher material utilization rate; and finally, better product quality. The equipment has a highly modular integrated profile, saving multiple pipelines and process steps, and at the same time minimizing production cost.

PD-VT Series

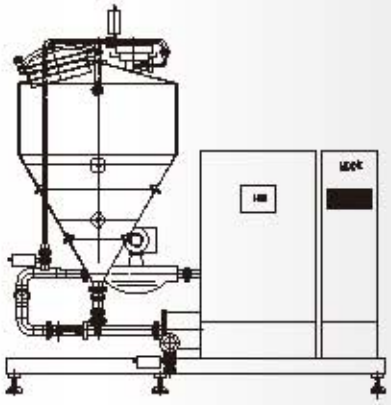
Model-selection Table

Model	Motor Power (KW)	Power Of Centrifugal Pump(kW)	Inlet/ Outlet Size	Flow Rate Range(m^3/h)	Max. Powder Suction Rate(kg/min)
PD30-VT	2.2	4	2.5"/1.25"	0-8	18
PD50-VT	7.5-11	4-5.5	2.5"/2"	0-16	25
PD80-VT	15-22	4-5.5	2.5"/2.5"	0-25	80
PD100-VT	22-30	5.5-7.5	2.5"/2.5"	0-30	100
PD120-VT	30-37	7.5	2.5"/3"	0-30	120
PD140-VT	30-45	7.5	3"/3"	0-40	120
PD165-VT	37-55	15	3.5"/3.5"	0-50	200
PD200-VT	55-75	18.5	4"/4"	0-80	300

Please consult FLUKO for more models...



PD-VT (1)



PD-VT (2)

Remarks

- The maximum working capacities in above table are based on medium as water;
- Powder suction rate depends on powder characteristics (such as particle size, swellability and liquidity etc.); if uncertain, please provide samples or make experiments for model selection;
- For special working conditions, please provide detailed data to FLUKO engineers for working out special solutions;
- FLUKO reserves the rights to change the specifications without announcement.

PLM®

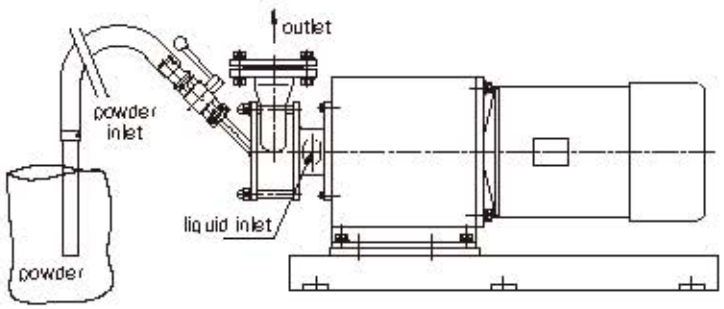
PLM Powder & Liquid Mixing System

PD-XG Series

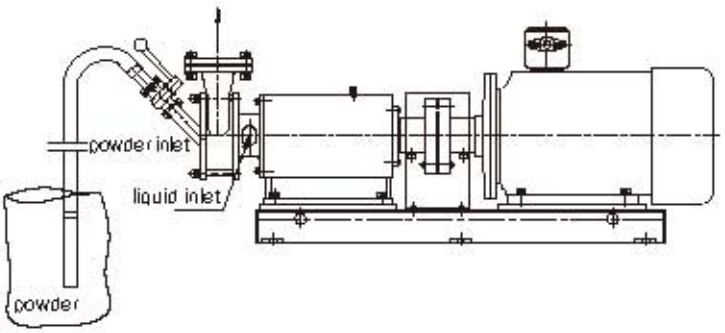
Model-selection Table

Model	Motor Power (KW)	Rotation Speed (rpm)	Inlet/Outlet Size	Flow Rate Range(m^3/h)	Max. Powder Suction Rate(kg/min)
PD100-XG	11/14	1470/2900	2"/2"	0-10	10
PD120-XG	18.5/22	1470/2900	2.5"/2.5"	0-20	15
PD140-XG	26/30	1470/2900	3"/3"	0-30	25
PD165-XG	32/37	1470/2900	4"/4"	0-50	35
PD200-XG	37/45	1470/2900	5"/5"	0-70	55
PD300-XG	45/52	1470/2900	6"/6"	0-90	75

Please consult FLUKO for more models...



PD-XG(1)



PD-XG(2)

Remarks

- The maximum working capacities in above table are based on medium as water;
- Powder suction rate depends on powder characteristics (such as particle size, swellability and liquidity etc.); if uncertain, please provide samples or make experiments for model selection;
- For special working conditions, please provide detailed data to FLUKO engineers for working out special solutions;
- FLUKO reserves the rights to change the specifications without announcement.

PLM®

PDS Automatic Powder/ Liquid Mixing System

PDS is a self R&D automatic powder mixture system. Keep the dynamic balance of the system and maintain powder and liquid mixing process; can accomplish large number of continuous mixing material, and has an excellent stability of batch high production efficiency.

Powder / liquid inlet ratio
Large quantity powder / liquid mixture
Stable batch quality
Full automatic control
Reliable in-site cleaning

System Parameter

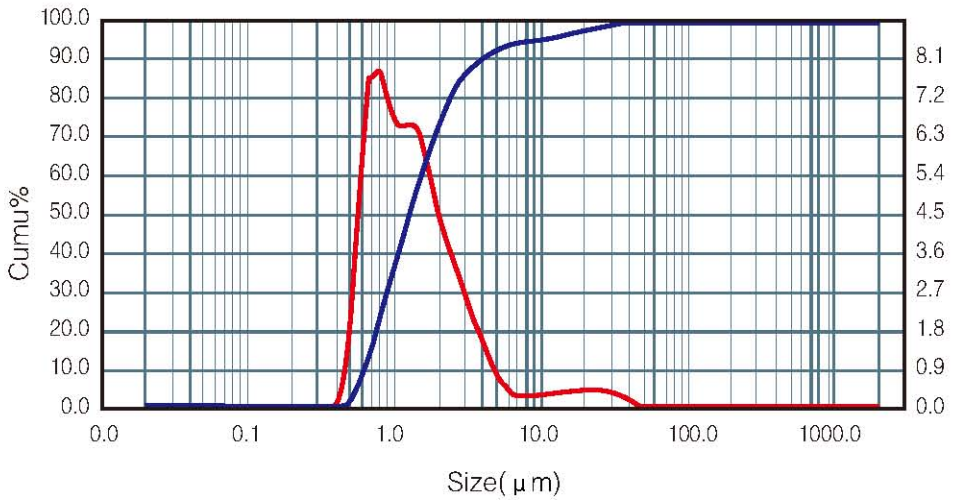
Flow rate : 10~20m³/h

Powder sucking rate: 200~350kg/min(Whey powder) 180~300kg/min(Sugar) 60~120kg/min(CMC)

Applications: Milk powder, CMC powder, Whey powder, Sugar, Cereal flour, Tio2, Titanium Dioxide, Bentonite, Nano Materials and so on.

Particle Size Distribution of the Whey Solution

D50=1.250 μm D90=3.896 μm



Particle size μm	Content %
0.500	1.36
1.000	38.22
2.000	73.33
3.000	85.44
5.000	92.62
10.000	95.08
20.000	97.49
30.000	99.05
50.000	100.00
100.000	100.00

Remarks

- The maximum working capacities in above table are based on medium as water;
- Powder suction rate depends on powder characteristics (such as particle size, swellability and liquidity etc.); if uncertain, please provide samples or make experiments for model selection;
- For special working conditions, please provide detailed data to FLUKO engineers for working out special solutions;
- FLUKO reserves the rights to change the specifications without announcement.

Fisco® Reactor System – Industrial Scale

Complex specification, convenient handling

The FISCO is a perfect all-in-one dispersing & mixing system. It integrates the mixing, homogenizing, heating and vacuum supply functional modules into one assimilated system, which is ideal for mixing cream products, chemical synthesis and high viscosity materials . It can be configured for laboratory scale for experiments, or for industrial scale production.

Working Principle

The FISCO vacuum homogenizer series is an integrated set of reaction systems for homogenizing and emulsifying under vacuum. It is equipped with highly efficient macro mixers, high shear homogenizers, reliable vacuum sealing systems and temperature control systems.

The mixer is designed for computer simulation. When running it continuously produces new interfaces for the materials to be processed, and has a series of effects on materials such as shearing, compression and folding, so that the materials are fed continuously into the high shear homogenizer.

The high shear homogenizer is professionally developed by FLUKO. The intricately designed high speed stator and rotor are capable of generating powerful shearing, impacting and turbulent flows, which ensure higher efficiency of the homogenization and emulsification process.

The combined use of macro mixer and high shear homogenizer brings elegant solutions to homogenize and emulsify materials of high viscosity and ensures outcomes of unsurpassed refinement.

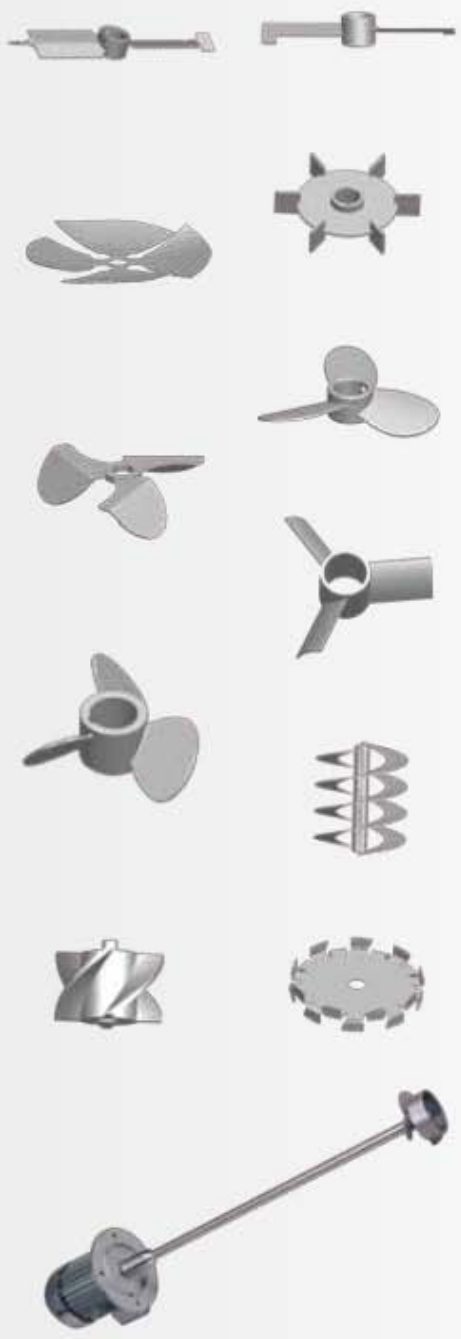
Features & Performance

With technology and scheme sourced from Germany, the reactor is specially designed for product homogenization and emulsifying. The stirring mixer can be flexibly interchanged with scraper or spiral agitators, to easily process highly viscous materials (1–300,000cp).

The real–time monitoring and control unit facilitates control of parameters such as temperature, pressure and PH value. Based on meticulously designed components, it is adapted for CIP/SIP control and complies with international sanitation standards and specifications.

Eumix ® Eumix Agitator

Accurate performance



The partner German Fluid Kotthoff GmbH has more than sixty-year history of agitator manufacture. For any special requirements of agitating processes, the most appropriate model will be recommended based on long experience and agitator design software calculations. (Dancy: I am quite wary of using the Fluid Kotthoff name here, unless Mr Zhou is confident that the German company will have no objection to the use of its name)

Correct Model Selection

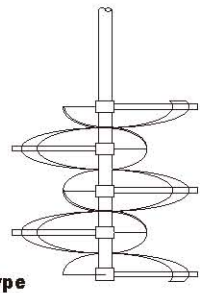
1.Specify the shape and size of the mixing tank and groove, as well as operating conditions and related requirements. Then provide name, density, viscosity and components of the intended materials.

2.Select the appropriate type of agitator according to the technological condition, mixing purpose and requirements. Take into consideration the agitator dynamic characteristics, and the flow condition caused by agitation.

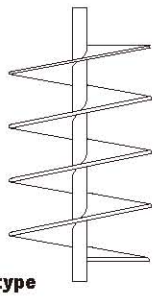
3.Experiments and computer simulation should then be conducted to determine motor power, rotation speed and agitator diameter, based on the type of agitator selected, the material flow condition in the mixing process, and the technical requirements for the mixing time, sedimentation velocity, and dispersing effect.

4. Determine the requisite special surface treatment and structural design of the equipment to comply with sanitary and hygiene requirements.

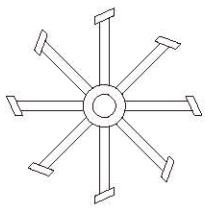
FLUKO engineers will provide the optimal design scheme for agitators taking into account individual conditions in each case.



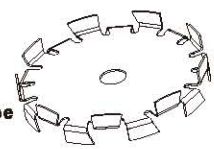
Spiral type
axial flow
applicable for material viscosity less than 10^5



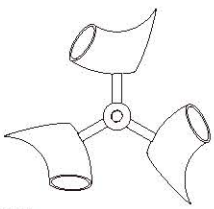
Screw type
axial flow
applicable for material viscosity less than 10^5



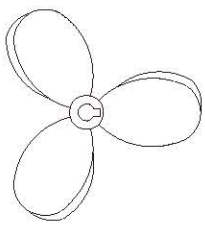
Brumajin type
radial flow
applicable for material viscosity less than $5x10^4$



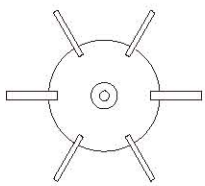
Dissolving type
radial flow
applicable for material viscosity less than 2000



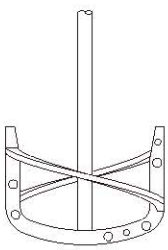
Eustar type
turbulence flow
applicable for material viscosity less than $3.5x10^4$



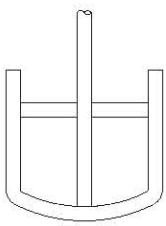
Propeller type
axial flow
applicable for material viscosity less than 2000



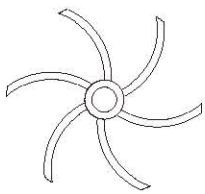
Disc type with straight blade
radial flow
applicable for material viscosity less than $5x10^4$



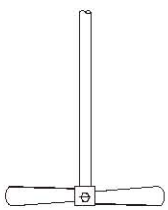
Reinforced paddle type
axial flow and horizontal circulating flow at different levels
applicable for material viscosity less than 10^5



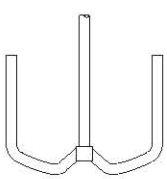
Paddle type
horizontal circulating flow at different levels
applicable for material viscosity less than 10^5



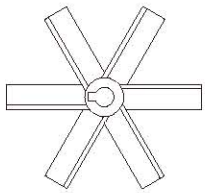
Turbine type with curved blade
radial flow
applicable for material viscosity less than 10^4



Two-blade type
mainly horizontal circulating flow at low speed
and radial flow at high speed
applicable for material viscosity less than 2000



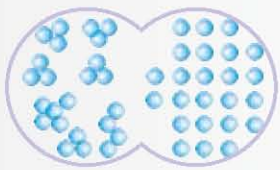
Anchor type
horizontal circulating flow at different levels
applicable for material viscosity less than 10^5



Turbine type with folded blade
radial flow
applicable for material viscosity less than 10^4

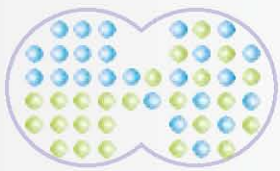
More Information…

Dispersing



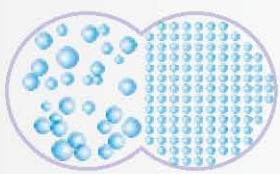
Suspension, pill coating, drug depolymerization, paints dispersion, lipsticks, vegetable hoosh, mustard mixture, catalyst, flatting agent, metals, paints, modified asphalt, production and depolymerization of nano-materials

Mixing



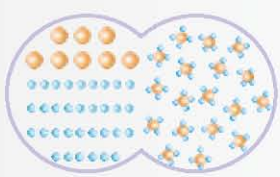
Syrup, shampoo, detergent, juice concentrates, jogurt, desserts, mixed milk products, printing ink and ceramic glaze

Homogenizing



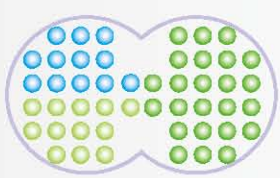
Drug emulsion, ointment, cold cream, facial mask, facial cream, homogenates, milk product homogenization, juice, printing ink, confiture

Emulsifying



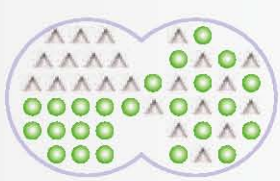
Drug emulsion, ointment, cold cream, facial mask, facial ream, emulsified essence, oil-water emulsification, emulsified asphalt, resinification, wax emulsification, PUD emulsification, agricultural pesticide

Reacting



Efficient extraction, hydrogenation, saponification, sulphonation, TDI, MDI, microspheres reaction and others

Powder/liquid mixing



Fumed silica, silicon dioxide, white carbon black, titanium white, betonite, talcum powder, CMC, xanthan gum, sugar, milk

Questionnaire for Model Selection

Company name _____ Address _____

Contact person _____ Telephone No. _____ Email _____

Sanitation grade: ☐ general ☐ hygienic ☐ aseptic explosion-proof grade _____

Working Condition:

- End product: _____
- Process description: _____

☐ dissolving ☐ dispersing ☐ emulsifying ☐ homogenizing

☐ suspension ☐ crushing ☐ depolymerizing ☐ extraction

- Process type: ☐ Inline

  required flow rate: _____ m^3/h

  ☐ Batch:

  working capacity: _____ L/batch required time: _____ min

  Tank description (attach the drawing if possible):

  diameter: _____ mm height: _____ mm

- Normal working temperature: T _____ ℃ Max. temperature allowed: _____ ℃

  Working pressure range: P _____ bar Raw material particle size: _____ μm

  Max. viscosity: μ _____ cp Density: ρ _____ kg/m^3 Solid content: _____ %

- Fluidity/flow like: _____
- Is it easy to foam? ☐ yes ☐ no ☐ much ☐ little
- Phase inversion: ☐ yes ☐ no
- Cleaning method: _____ Sterilization method: _____ Medium-contact materials: _____

Please specify your required process flow or attach your process flow diagram:

Remarks: Please fill the blanks correctly, and then submit by fax (+86-21-69927799) or on website www.fluko.com.

FLUKO®

FLUKO Equipment Korea

Korea Sole Agent : Alfa Tech Korea
Tel.: 0082 (0)54 933 6286
Fax. 0082 (0)54 933 6287 / Mobile 0082 (0)10 63 88 33 44
Web : www.alfatech.kr / www.alfatech21.com
E-mail : rino6287@naver.com