

DISPERSION

GRINDING

MIXING



Designed for Performance
Engineered for Excellence



PRODUCT CATALOGUE
2014

Since 1992 ...

OUR PROFILE

IEC Plant Engineering Sdn Bhd has been manufacturing a wide range of high quality Dispersion, Grinding and Mixing Equipment for Paint, Ink, Chemical, Adhesive and Polymer industries.

To meet the varied processing requirements of the industries, our equipment is available in either standard or custom designs.

Our commitment to the demanding needs of our customers has enabled us to develop and manufacture equipment that is efficient, reliable, safe, user-friendly and cost effective.

With our years of experience, sound technical know-how and proven capabilities, we have also undertaken numerous Turnkey Design and Build projects for Paint and Ink industries.

Our well equipped manufacturing facilities backed by a team of skilled work force and qualified engineers are able to serve the most demanding requirement and innovation of the industries.

Today, we are recognized as a leading Paint and Ink Production Equipment manufacturer in Asia Pacific and the Middle East.

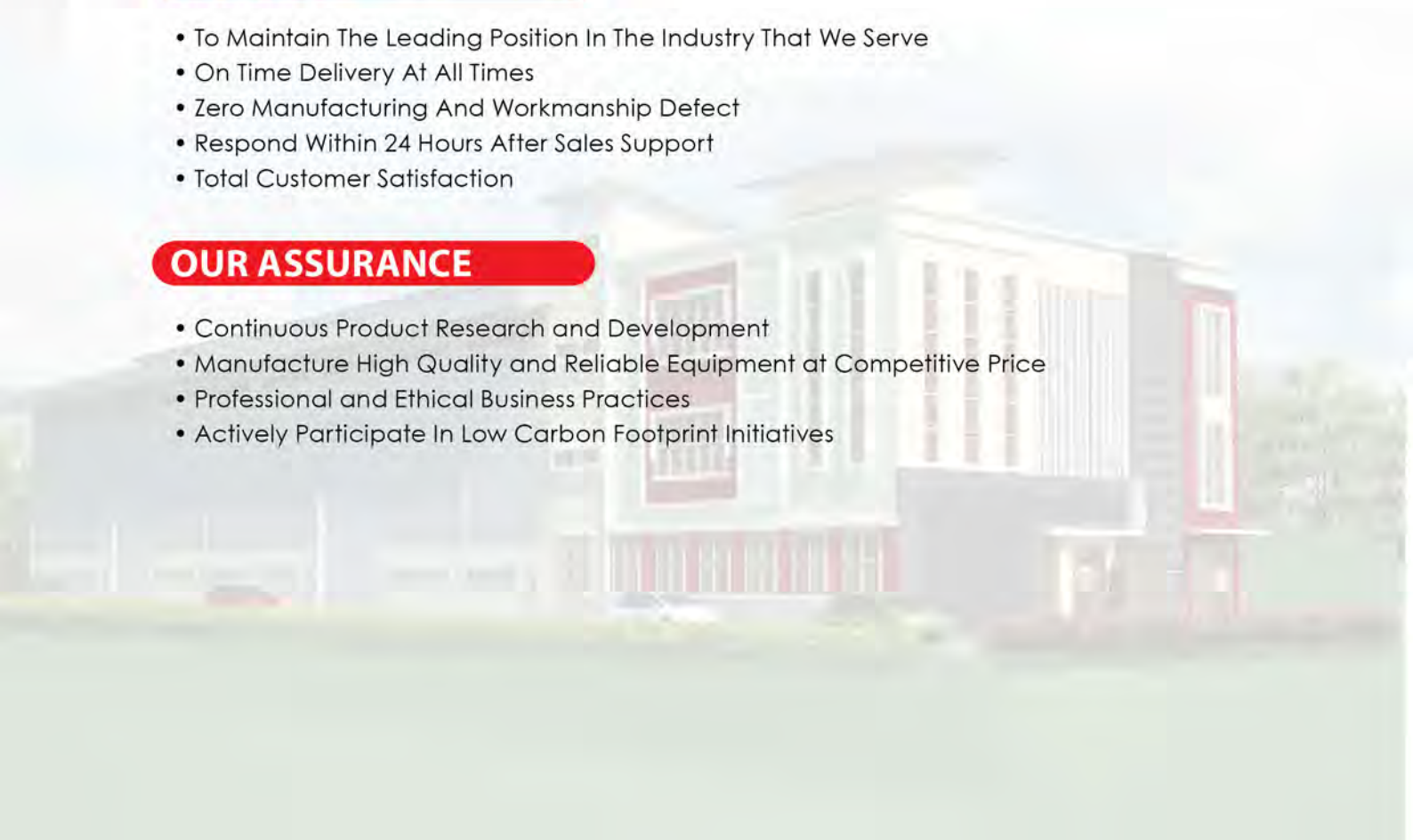
With the incorporation of IEC+ s.r.l., we have brought into our fold 35 years of technical know-how and expanded our manufacturing capacity as well as our after sales support. IEC+ s.r.l. is strategically positioned to serve European, African, Russian and Latin American regions.

OUR AIM

- To Maintain The Leading Position In The Industry That We Serve
- On Time Delivery At All Times
- Zero Manufacturing And Workmanship Defect
- Respond Within 24 Hours After Sales Support
- Total Customer Satisfaction

OUR ASSURANCE

- Continuous Product Research and Development
- Manufacture High Quality and Reliable Equipment at Competitive Price
- Professional and Ethical Business Practices
- Actively Participate In Low Carbon Footprint Initiatives



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HIGH SPEED DISPERSER

FLOOR MOUNTED FM SERIES

- Designed for dispersion or mixing of different rheology behavior exhibiting products like paint, ink, adhesive and polymer.
- Typically handles viscosity up to 25,000cP.
- Ideal for heavy duty and rugged application.
- Precisely engineered for vibration free and low noise operation.
- Reliable and easy maintenance hydraulic lift mechanism allows usage of mobile tanks.
- Available in fixed speed or frequency inverter driven variable speed.
- Built with tested and proven quality parts and components.
- Suitable for installation and operation in Hazardous Area Zone 1 Classification or Safe Area.
- ATEX compliance to II 2GD c IIB T3 is available on request.



Model	HSD-FM-F1		HSD-FM-F2					HSD-FM-F3				HSD-FM-F4	
Main Motor Power (kW)	4	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90
Dispersion Capacity (L)	100 ~ 400		200 ~ 600			400 ~ 1000		600 ~ 2000			1000 ~ 2000		
<i>Or custom design and build to suit your process requirement</i>													

HIGH SPEED DISPERSER ACCESSORIES



Type A



Type B

COVERS



DISH COVER FOR VACUUM OPERATION



FLAT COVER PNEUMATIC OPERATED OR GRAVITY



COVER WITH CHARGING CHUTE

SHAFT GUARD



FIX TYPE



DETACHABLE TYPE



CLAMP TYPE

TANK CLAMP



CHAIN / BELT CLAMP WITH TORQUE SWITCH



SCISSORS CLAMP WITH TORQUE SWITCH



ADJUSTABLE TANK CENTERING DEVICE

HEAD BOOM TURNING CONFIGURATION



MANUAL UNLOCK & PUSH



MANUAL UNLOCK & TURN WITH GEAR LEVER

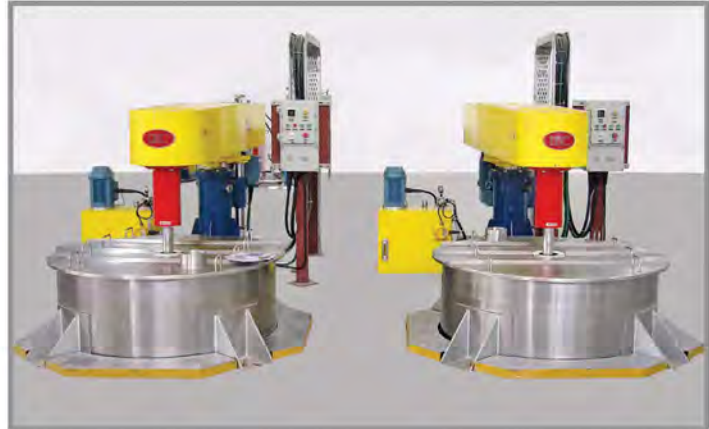


AUTOMATIC TURNING USING MOTORISED GEARBOX

HIGH SPEED DISPERSER

PLATFORM MOUNTED PM SERIES

- Designed for dispersion or mixing of different rheology behaviour exhibiting products like paint, ink, adhesive and polymer.
- Typically handles viscosity up to 25,000cP.
- Ideal for heavy duty and rugged application.
- Precisely engineered for vibration free and low noise operation for deep tanks.
- Reliable and easy maintenance hydraulic lift mechanism allows impeller lifting for easy cleaning during product change.
- Various swing mechanism is available for multiple fixed tank use.
- Available in fixed speed or frequency inverter driven variable speed.
- Built with tested and proven quality parts and components.
- Suitable for installation and operation in Hazardous Area Zone 1 Classification or Safe Area.
- ATEX compliance to II 2GD c IIB T3 is available on request.



TUV IT 11 ATEX 027

Model	HSD-PM-F1		HSD-PM-F2			HSD-PM-F3			HSD-PM-F4			HSD-PM-F5		
Main Motor Power (kW)	15	18.5	22	30	37	45	55	75	90	110	132	160	200	250
Lifting Stroke (mm)	1500		2000/2500						2500/3000			3000/3500		
Dispersion Capacity (L)	400 ~ 600		600 ~ 1000		600 ~ 2000		1000 ~ 5000		2000 ~ 8000			4000 ~ 10000		
<i>Or custom design and build to suit your process requirement</i>														

HIGH SPEED DISPERSER TANK MOUNTED TM SERIES



LOAD CELL



- Designed for dispersion or mixing of different rheology behaviour exhibiting products like paint, ink, adhesive and polymer.
- Typically handles viscosity up to 25,000cP.
- Ideal for heavy duty and rugged application.
- Precisely engineered for vibration free and low noise operation for deep tanks.
- Available in fixed speed or frequency inverter driven variable speed.
- Built with tested and proven quality parts and components.
- Suitable for installation and operation in Hazardous Area Zone 1 Classification or Safe Area.
- ATEX compliance to II 2GD c IIB T3 is available on request.



TUV IT 11 ATEX 027



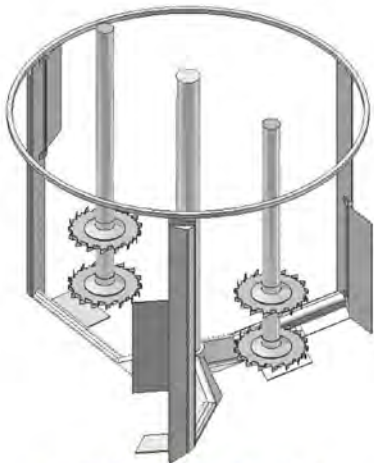
MULTI-SHAFT DISPERSER

MSD SERIES

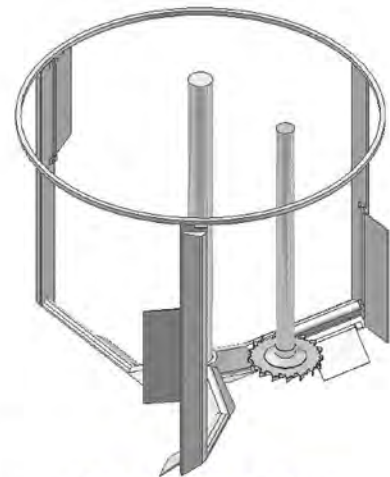
- Designed for dispersion or mixing of different rheology behaviour exhibiting products like paint, ink, putty, adhesive and polymer.
- Typically handles viscosity up to 500,000cP.
- Ideal for high viscosity product which demands heavy duty and rugged construction.
- Precisely engineered for vibration free and low noise operation for big batch production.
- The hydraulic lift and swing mechanism available for usage of single or multiple tanks.
- Vacuum dispersion or mixing is available on request.
- Available in fixed speed or frequency inverter driven variable speed.
- Built with tested and proven quality parts and components.
- Suitable for installation and operation in Hazardous Area Zone 1 Classification or Safe Area.
- ATEX compliance to II 2GD c IIB T3 is available on request.



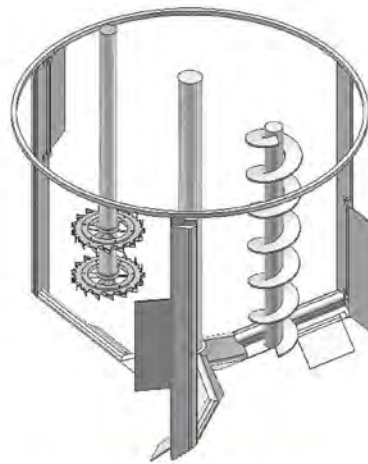
MULTI-SHAFT DISPERSER CONFIGURATION



CONFIGURATION 1



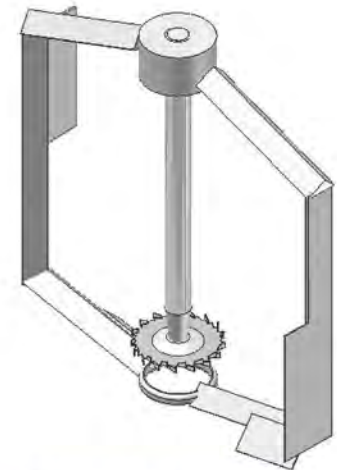
CONFIGURATION 2



CONFIGURATION 3



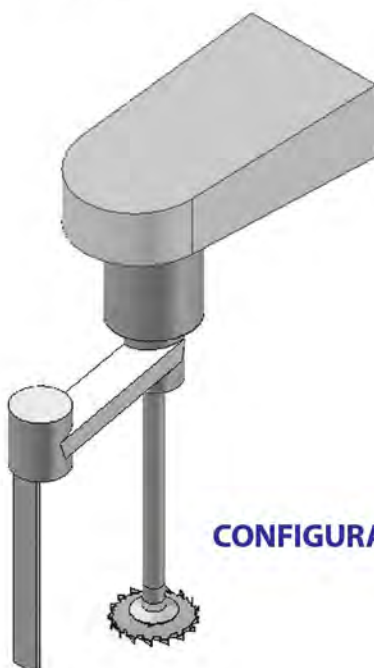
CONFIGURATION A



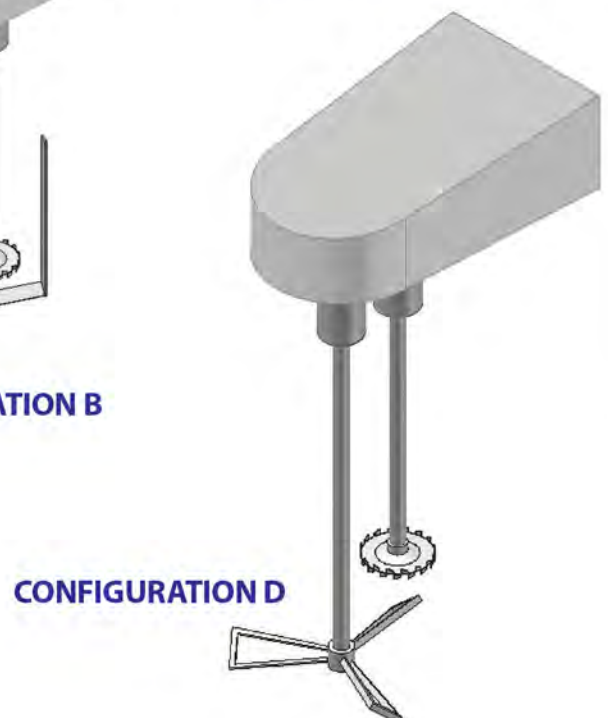
CONFIGURATION 4



CONFIGURATION B



CONFIGURATION C



CONFIGURATION D

MIXER GANTRY AGM SERIES



Fixed or Variable Speed – Quick Coupling Impellers – Pneumatic Lift Covers – Ideal for Color Matching



Fixed or Variable Speed
- Quick Coupling Impellers
- Ideal for Color Matching



High Torque Quick Coupling Designed for Medium Viscosity
- Ideal for Color Matching



Quick Coupling Design for Low Viscosity

Interchangeable High Torque Paddle Impeller



MIXER

FLOOR MOUNTED AFM SERIES

- Designed to mix and homogenise products like paint, ink, adhesive and polymer in mobile tanks.
- Typically handles viscosity up to 100,000cP.
- Ideal for colour matching, physical property adjustment or mill base homogenisation during circulation grinding in Horizontal Mill.
- Dry-well design to positively prevent oil leak to product is available on request.
- Available in fixed speed or frequency inverter driven variable speed.
- Built with tested and proven quality parts and components.
- Suitable for installation and operation in Hazardous Area Zone 1 Classification or Safe Area.
- ATEX compliance to II 2GD c IIB T3 is available on request.



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Various Impeller Design To Suit
Process Requirement Is Available

MIXER

TANK MOUNTED ATM SERIES

- Designed to manufacture low to medium viscosity paint, ink, resin and polymer.
- Suitable for mixing, homogenising, resin reaction or settlement prevention in open tanks, pressure vessels, vacuum vessels, reactors or bulk storage tanks.
- Typically handles viscosity up to 10,000cP with various conventional and high efficiency impellers.
- Dry-well design to positively prevent oil leak to product is available on request.
- Lip-Seal, Packing Seal, Single Mechanical Seal and Double Mechanical Seal is available for various operating pressure and temperature conditions.
- Split shaft; and free over-hang or bottom steady-bearing option is available for deep tanks.
- Available in fixed speed or frequency inverter driven variable speed.
- Built with tested and proven quality parts and components.
- Suitable for installation and operation in Hazardous Area Zone 1 Classification or Safe Area.
- ATEX compliance to II 2GD c IIB T3 is available on request.



TÜV IT 11 ATEX 027



MIXER PLANETARY



- A very effective mixing machine for high viscosity media especially for offset ink and putty.
- Mixing process can be operated under vacuum condition.
- Packing, Lip Seal or Mechanical Seal is available as an option.
- Gears used for the planetary mixers are precisely ground finish thus giving a very smooth & low noise operation.
- Robustly built to give the best stability and trouble free operation.
- Safety features like machine guard with limit switch, tank cover limit switch, raising up limit switch, etc. can be incorporated.
- For Hazardous Area application, the electrical components will be in compliance with ATEX Directive 94/9/EC, NEC Codes or Local Regulation.



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TYPES	PMFM 100	PMFM 300	PMFM 500	PMFM 800	PMFM 1000	PMFM 1200
BATCH VOLUME (L)	100	300	500	800	1000	1200
POWER (kW)	7.5	11	15	22	30	37

MIXER

PILOT BATCH ELM SERIES



ELM-5

- 1L ~ 5L Mixer
- 1.5kW Electric Motor
- Variable Speed
- 0 ~ 3600 rpm
- Pneumatic Lift
- Stainless Steel Frame



ELM-20

- 5L ~ 20L Mixer
- 4kW Electric Motor
- Variable Speed
- 0 ~ 3600 rpm
- Pneumatic Lift
- Stainless Steel Frame



ELM-G-5

- 1L Mill Base Batch Bead Mill
- 1L ~ 5L Mixer
- 4kW Electric Motor
- Variable Speed
- 0 ~ 3600 rpm
- Pneumatic Lift
- Stainless Steel Frame



ELM-G-20

- 1L Mill Base Batch Bead Mill
- 5L ~ 20L Mixer
- 4kW Electric Motor
- Variable Speed
- 0 ~ 3600 rpm
- Pneumatic Lift
- Stainless Steel Frame



ALM-5

- 1L ~ 5L Mixer
- Air Motor
- Variable Speed
- 0 ~ 3000 rpm
- Pneumatic Lift
- Stainless Steel Frame



ELM-SDV-20

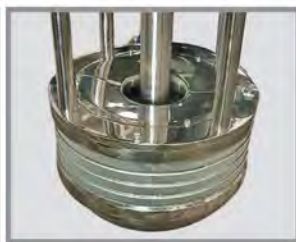
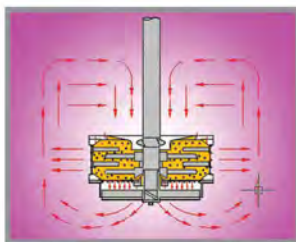
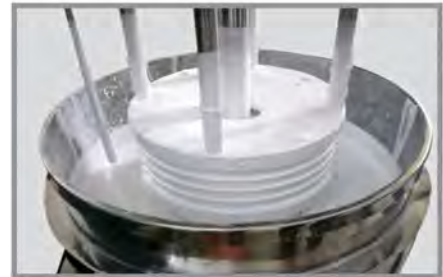
- 5L ~ 20L Multishaft
- Vacuum Operation
- 4kW/0.37kW Electric Motor
- Variable Speed
- 0 ~ 3600 rpm, 0 ~ 200 rpm
- Pneumatic Lift
- Stainless Steel Frame

BASKET MILL

BSB SERIES



- Ideal for small batch and frequent colour change
- High Efficiency
- Easy Cleaning
- Variable Speed
- Simple operation, user friendly
- Timer control for grinding time
- Built-in safety features



BSB-SERIES

- Product movement is by radial acceleration of the grinding disk or pegs
- Product is drawn in from the upper side of basket and is radially and axially discharged from the side screen and bottom screen respectively

Model	Disk - Impeller			Peg - Impeller		
	BSB-D-10	BSB-D-20	BSB-D-40	BSB-P-10	BSB-P-20	BSB-P-40
Power Option (kW)	7.5 or 11	15 or 22	30 or 37	15 or 22	30 or 37	45 or 55
Capacity (L)	100 ~ 200	200 ~ 400	400 ~ 800	100 ~ 200	200 ~ 400	400 ~ 800
Viscosity (cP)	200 ~ 1200			200 ~ 8000		

HORIZONTAL MILL

HE SERIES

- HE series horizontal disk mill is a high efficiency mill designed for automotive coating, CED coating, epoxy coating, plastic coating, flexo ink, gravure ink and other demanding grinding requirement.
- HE series has been field tested and proven over the years for :-
 - Narrow particle size distribution.
 - High colour strength development.
 - Higher flowrate.
- Grinding Disk Peripheral Speed: 11~16m/s
- Suitable for circulation or passing grinding.
- Engineered beads separation screen which permits higher flowrate.
- High heat transfer rate between chill water and the mill base.
- Highly instrumented for safe, user friendly and unmanned operation.
- Designed for Hazardous Area or Safe Area application.
- For Hazardous Area application, the electrical components will be in compliance with ATEC Directive 94/9/EC, NEC Codes or Local Regulation.



HE-0.6



HE-1.7



HE-5



HORIZONTAL MILL

HE SERIES



HE-10



HE-30



HE-50



HE-60



HE-100



HE-250



HE-50 TWIN MILL
GRINDING PROCESS



Model	HE-0.6	HE-1.7	HE-5	HE-10	HE-15	HE-20	HE-30	HE-50	HE-60	HE-100	HE-250
Chamber Capacity (L)	0.6	1.7	5	10	15	20	30	50	60	100	250
Mill Motor Power (kW)	4	4	11	15	15	22	30	37	45	75	90
Typical Flow (L/h)	1~30	2~60	40~120	50~250	60~350	90~550	120~700	250~1400	300~1800	500~2800	700~5000

FILTRATION SKID



Filtration Skid :
Diaphragm Pump with
Bag Filter Housing



Filtration Skid :
Diaphragm Pump
with Bag & Cartridge
Filter Housing (Combo)



Filtration Skid :
Diaphragm Pump
with Cartridge
Filter Housing



Filtration Skid :
Gear Pump with
Cartridge Filter Housing



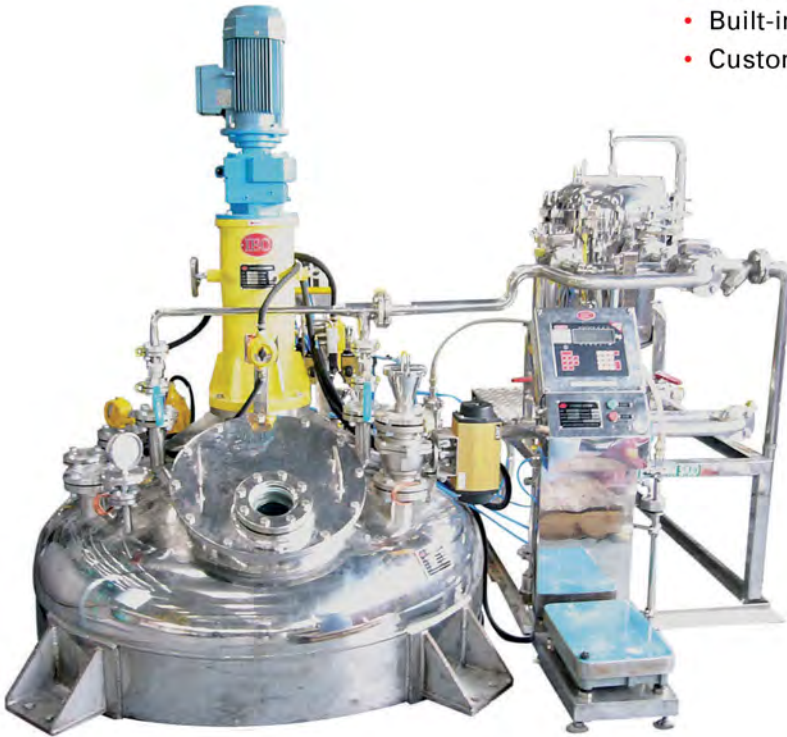
Mirror polished
components for
easier cleaning



HARDENER PLANT

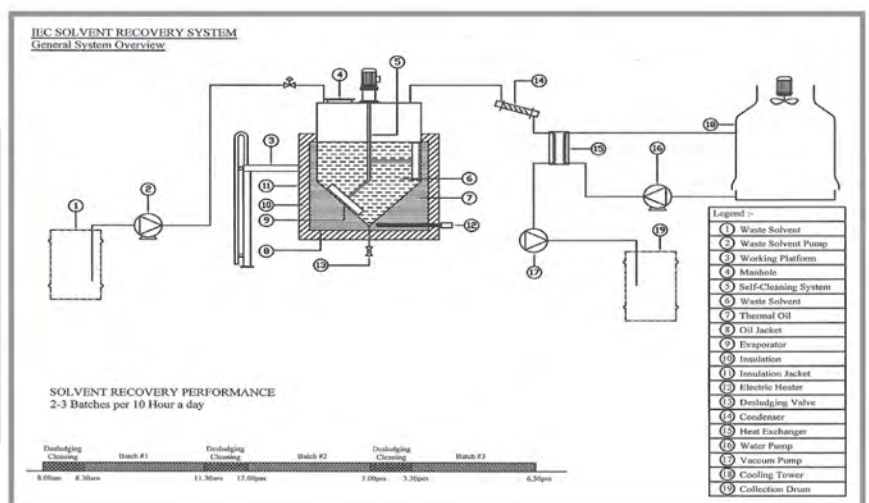


- Automotive Refinish Hardener manufacturing can be build fully automatic or semi – automatic.
- Automatic or manual N2 purging and blanketing.
- Automatic or manual Resin and Solvent charging.
- Non contact automatic dosing for Tosyl Isocyanate.
- Molecular sieve solvent drying.
- Automatic tank washing.
- Built-in safety features.
- Custom made filling machine can be supplied.



SOLVENT RECOVERY PLANT

- Recycle valuable resources
- Cost savings
- Highly efficient and economically viable
- Safe and health hazard free
- Recovery by batches
- High boiling point solvents can be distilled by using vacuum system
- Fully explosion proof compliance
- Fully safety compliance
- Self cleaning designs are available
- Easy to operate



Model	SRS-50	SRS-100	SRS-200	SRS-400	SRS-800	SRS-1000
Batch Size (L)	50	100	200	400	800	1000

TURNKEY PROJECT



TURNKEY PROJECT





VISCOSITY CONVERSION CHART

Poise P	Centi-poise cP	Anest Iwata cup sec (NK-2)	Ford cup sec (#4)	Ford cup sec (#3)	Krebs KU	Zahn cup sec (#4)	Zahn cup sec (#2)	Saybolt SSU
0.1	10		5				16	60
	15		8				17	80
0.2	20	5	10	12			18	100
	25	8	12	15			19	130
0.3	30	11	15	19			20	150
0.4	40	14	17	25			22	210
0.5	50	16	19	29	30		24	250
0.6	60	19	21	33	33		27	320
0.7	70	21	23	36	35		30	370
0.8	80	25	26	41	37		34	430
0.9	90	29	29	45	38		37	480
1.0	100	31	31	50	40	10	41	530
1.2	120	38	36	58	43	11	49	580
1.4	140	44	41	66	46	13	53	690
1.6	160	49	45	67	48	14	56	790
1.8	180	56	51		50	16	74	900
2.0	200	63	56		52	17	82	1,000
2.2	220	69	61		54	18		1,100
2.4	240	76	67		56	20		1,200
2.6	260	83	72		58	21		1,280
2.8	280	88	76		59	22		1,380
3.0	300	96	83		60	24		1,475
3.2	320					25		1,530
3.4	340					26		1,630
3.6	360				62	28		1,730
3.8	380					29		1,850
4.0	400				64	30		1,950
4.2	420					32		2,050
4.4	440					33		2,160
4.6	460				66	34		2,270
4.8	480				67	36		2,380
5.0	500				68	37		2,480
5.5	550				69	40		2,560
6.0	600				71	44		2,900
7.0	700				74	51		3,370
8.0	800				77	58		3,880
9.0	900				81	64		4,300
10.0	1,000				85			4,600
12.0	1,200				92			5,620
14.0	1,400				95			6,480
16.0	1,600				100			7,500
18.0	1,800							8,500
20.0	2,000				103			9,400
25.0	2,500				114			11,600
30.0	3,000				121			14,500
35.0	3,500				129			15,500
40.0	4,000				133			18,500
45.0	4,500				136			21,000
50.0	5,000							23,500
60.0	6,000							28,000
70.0	7,000							32,500
80.0	8,000							37,000
90.0	9,000							41,000
100.0	10,000							48,500
150.0	15,000							69,500
200.0	20,000							93,000
200.0	30,000							140,000



IEC

Designed for Performance
Engineered for Excellence



**SALES
SERVICE
MANUFACTURING**

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