WAL1 PIPELINE HIGH SHEAR DISPERSING EMULSIFIER

HD Process NZ LTD
Specialists in sanitary process equipment

Unit 1, 10c Maurice Rd, Penrose, Auckland New Zealand
PO Box 2082, Shortland St, Auckland 1140
Tel 09-580 2520 Fax 09-580 2525
Email mail@hdprocess.co.nz

Working Principle

Pipeline high shear dispersing emulsifier is a high performance equipment used for continuous prod-uction or circulated treatment of fine material.In the small chamber,there are 1-3 sets of paired and clutched stators and rotor. Driven by motor,the rotor revolve quickly and produces a strong axial suctionforce which intakes the material to the chamber. The machine disperses, shears and emulsifiesthe material in shortest time , and the diameter range .of the particles gets smaller so that fine and stable products are produced.

High Shear Dispersing Emulsifier System

Pipeline High Shear Dispersing Emulsifer

1.Stator 2.Screw cap 3.Flexible gasket 4.Flat gasket 5.Rotor 6.Pump cavity 7. Mechanical seal (stationary ring) 8.Mechanical seal (moving ring) 9.Mechanical seal (stationary ring) 10.Seal cool seat 11.Pump seat 12.Pin 13.Pump shaft 14.Motor 15 .Support 16. Frame

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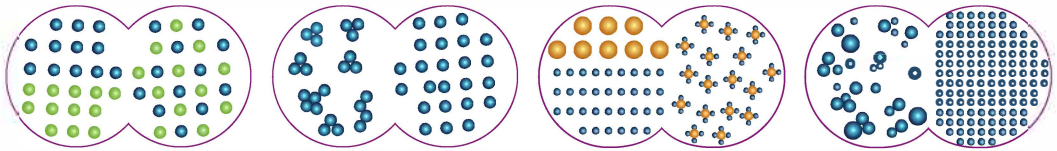
High Shear Dispersing Emulsifier Is Applied In Many Fie.....



Mixing Dispersing Emulsifying Homogenizing

Mixing dissolving	Soluble solid or liquid blends together with liquid in the state of the molecule or the gum Crystallization powder,salt,suguar,ether sulphate ,abrasive ,hydrolysising colloid,CMC thixotropy,rubber,natural and synthetic resin
Dispersed suspension:	Unsoluble solid or liquid forms finer partical blended solution or suspended solution Catalyst,flatting agent ,pigment ,graphite,paint coating,printing ink
Emulsification	Unsoluble liquid together with liquid does not separate Cream ,ice cream , animal oil ,vegetable oil ,protein ,silicon oil ,light oil ,mineral oil ,paraffin
Homogeneity :	Make emulsification and suspended grain size finer with more even distributionCream,flavouring,fruitjuicejam,condiment,cheese,fatmilk,toot
Thick liquid :	Cell' s tissue ,organic tissue,the animal and plant tissues
Chemical reaction :	Nanometer material,inflating with higher speed ,synthesization with higher speed
Extraction:	The vortex extr action
Depolymerization:	Nanometer powder ,dough powder

Applications

Fine chemical: pigment,glue ,sealing compound,resin emulsifying,germicidal agent,coagulating agent

Petroleum chemical: lubricating grease,diesel emulsifying, asphalt modification,catalyst,parafin emulsification

Bio-pharmacy: injection, antibiotic, ointment, biopreparate,capsule emulsification,sugar coating

Coating&oil inks: printing ink,emulsion coating,construction coating,auto paint,coating auxiliary agent

Pesticides: bactericidal agent, seed coating agent,herbicide,pesticide emulsified oil,ertilizer,biological pesticide

Nanometer material: dispersing and dispolymerizing nanometer material,extracting nanometer products in chemical reaction

Food industry: juice,jam,elly,ice cream,dairy products,additive,tea drinking

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Advantages Of Pipeline High Shear

Dispersing Emulsifier
Mass production suitable for continuous production of industrialized assembly line
Small diameter range,and highly even
Time saving,highly efficient and energy saving
Low noise,stable operation
Reduced quality difference between lots
Material is fully dispersed snd sheared
Daliver in short distancc with low lift
Easy operation,convenient maintenance
Automatic control

Rough teeth:
beat, shatter, shear,dissolve, rough disperse

Middle teeth:
disperse，refine, solutize, emulsify

Fine teeth:
superfine dis perse, emulsify, homogenize, pulpify

Experimental emulsion pump

Fixed emulsion pump

Movable emulsion pump

Main Parameter

Model	(KW) Power	(r/min) Rotation speed	(m^3/h) Capacity
WRL1-80	1.5	2900	0-1.5
WRL1-100	2.2	2900	0-3
WRL1-120	4	2900	0-4
WRL1-140	5.5/7.5	2900/2900	0-5
WRL1-165	7.5/11	2900/2900	0-8
WRL1-180	11/15	2900/2900	0-12
WRL1-185	15/18.5	2900/2900	0-18
WRL1-200	22	2900	0-25
WRL1-210	30	2900	0-35
WRL1-230	45	2900	0-50
WRL1-245	55	2900	0-75
WRL1-260	75	2900	0-90
WRL1-275	90	2900	0-110
WRL1-280	132	2900	0-130

WRL1 PIPELINE HIGH SHEAR DISPERSING EMULSIFIER

- SANITARY S VERSION WITH QUICK ACCESS INTERCHANGEABLE HEAD

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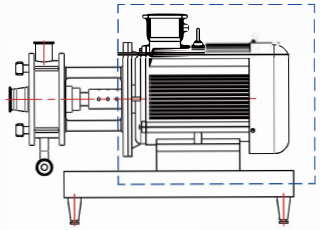

Easy dismantle emulsion pump

Main Parameter

Model	(KW) Power	(r/min) Rotation speed	(m^3/h) Capacity
WRL1-S-80	1.5	2900	0-1.5
WRL1-S-100	2.2	2900	0-3
WRL1-S-120	4	2900	0-4
WRL1-S-140	5.5/7.5	2900	0-5
WRL1-S-165	7.5/11	2900	0-8
WRL1-S-180	11/15	2900	0-12
WRL1-S-185	15/18.5	2900	0-18
WRL1-S-200	22	1450/2900	0-25
WRL1-S-210	30	1450/2900	0-35
WRL1-S-230	45	1450/2900	0-50
WRL1-S-245	55	1450/2900	0-75
WRL1-S-260	75	1450/2900	0-90
WRL1-S-275	90	1450/2900	0-110
WRL1-S-280	132	1450/2900	0-130

WRL3 PIPELINE HIGH SHEAR DISPERSING EMULSIFIER
- 3 STAGE

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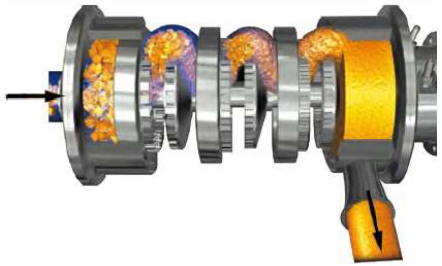
Principle Of Dynamics

1. Medium sucked in by strong axial suction force.
2. Single phase liquid, multi-phase liquid or suspended particles are pumped in though single-stage, double-stage or three-stage rotor and stators.
3. No matter what medium property is, pump will evenly shear all the liquid
with high-intensity and controllable force.
4. Shearing rate is constant, different sizes depends on gear of rotor and stator and speed of rotor.



Main Parameter

Model	(KW) Power	(RPM) Rotation speed	W (m^3/h) Capacity
WRL3-80	4	2900	0-1.5
WRL3-100	5.5	2900	0-3
WRL3-120	7.5	2900	0-4
WRL3-140	11	2900	0-5
WRL3-165	18.5	2900	0-8
WRL3-180	22	2900	0-12
WRL3-185	30	2900	0-18
WRL3-200	45	2900	0-25
WRL3-210	55	1470	0-35
WRL3-230	75	1470	0-50
WRL3-245	90	1470	0-75
WRL3-260	110	1470	0-90
WRL3-275	132	1470	0-110

WRL3 PIPELINE HIGH SHEAR DISPERSING EMULSIFIER
3 STAGE - cont;

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Working Principle

Three sets of stators and rotors are equipped in working cavity. Driving shaft in working cavity is an arm, electrical motor and the shaft in bearing cabinet can be connected by spring coupling to improve the operation quality of driving shaft. Seal form can be selected in different conditions. It is fit for .middle-large scale on-line continuous production or circulated treatment production process.

Optimized Combination Makes The System Reach The Best State

There are equipments in different forms and combine in optimization for different flow processes, to make the system reach the best state. Common process flows are as below: