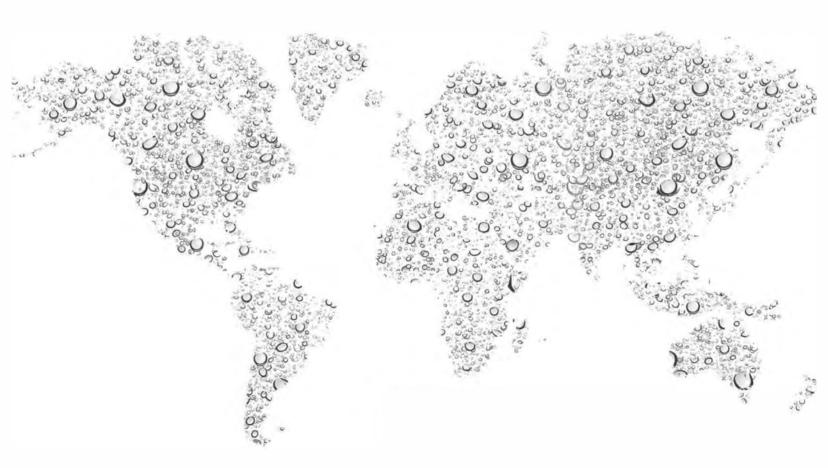


...moving fluids positively



...the worldover



CLASS SOCIETIES

Roto is capable of meeting various class requirements as specified for the Ship from various agencies, such as LRS (Lloyds Register of Shipping), DNV (Det Norske Veritas), GL (Germanischer Lloyd), BV (Bureau Veritas), ABS (American Bureau of Shipping), IRS (Indian Register of Shipping), RINA (Registro Italiano Navale), ClassNK (Nippon Kaiji Kyokai), etc.



INTERNATIONAL QUALITY

Roto Pumps is a leading positive displacement pump manufacturer with over 45 years of experience of designing, manufacturing, testing, supplying of pumps and parts. Continuous investments in in-house manufacturing facilities for critical components ensure 100% control over quality and customer satisfaction. Roto Pumps manufacturing units are certified for conformance with the ISO 9001-2008 Quality Surveillance Systems. All the Roto products are in compliance to CE Directives and can also offer products with ATEX Compliance.









Optimised Rotor Stator Geometry

- Improved Rotor Stator geometry minimises wear due to lower rubbing velocities as compared to conventional geometry, particularly useful in abrasive applications
- Lower starting torque and effective sealing line (Zero Leakage) improves volumetric efficiency
- Resulting in reduced power consumption and extended service life

Improved Pump Housing

- A sloped housing design reduces entry losses
- Facilitates easy drainage
- Its flexible housing orientation allows the suction port to be rotated in steps of 90° to suit any installation



Applications

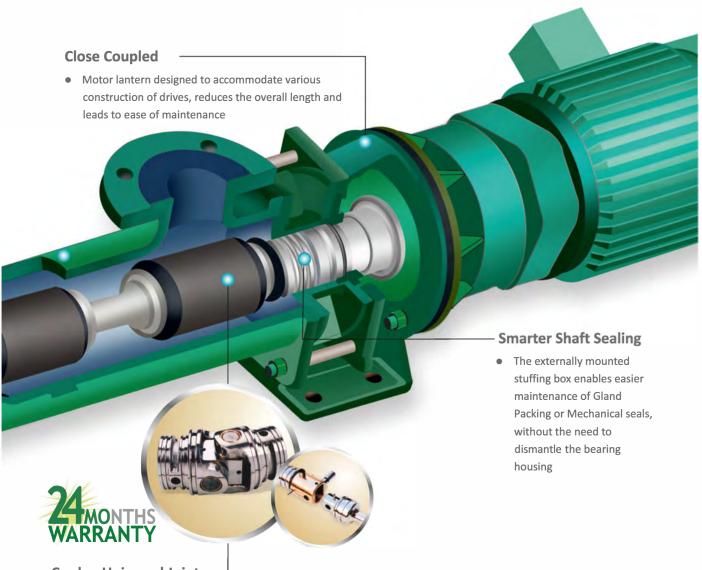
Cellulose • Ceramics & Refractories • Explosives • Chemicals & Fertilizers • Soap & Detergents • Cosmetics & Toiletries • Paint & Varnish • Petrochemicals & Refineries • Vegetable Oils • Fertilizers • Mining • Steel • Rubber • Starch • Construction • Man Made Fibres • Fisheries • Oil Exploration and Production • Pharmaceuticals • Cattle Feed • Electronics • Brewery and Distillery • Agriculture • Distribution Depots • Power • Dairies • Winery • Food and Beverages • Abattoir and Meat Processing

Sewage • Effluent & Water Treatment • Sugar • Paper • Pulp &

• Plantations • Fruit Processing • Dye Stuff • Textiles

Fluids handled

Digested Sewage Sludge • De-Watered Effluent Sludge • Industrial Effluents • Poly Electrolytes • Flocculants • Sulphited Sugar Juice • Massecuite • Magma • Molasses • Spent Wash • Paper pulp having 12-21% consistency Sodium Silicate • Alum • Latex • Coating Slurry • Glue • Black Liquor • Ceramic Slurry • Casein Slurry • Oils • Maize Slurry • Viscose • Paints • Varnish • Vegetable Oil • Ammonium Nitrate Solution • Resins • Acidic and Alkaline Slurry • Soap Stock • Gum Sludges • Bentonite Slurry • Cake Mix • Grease • Waste Asbestos Slurry • Explosive Slurry • Emulsion Matrix • Battery Paste • Printers Ink Paste • Petroleum Jelly • Grout Mix • Lumpy sticky substances such as Dirty Grease • China Clay • Filter Cakes • Soya Cake • Wine • Fruit Pulp • Fruit Juice • Condensed Milk • Butter Oil • Glucose • Cream • Curd • Yeast • Syrup • Malt Extract • Mine Water • Domestic Water Supply • Water for Cattle Feed • Animal Effluent • Liquid Manure • Sandy & Silty Water.



Cardan Universal Joint

- The Cardan type universal joint used in this pump is acknowledged to be far superior to the conventional gear joint, or single pin & bush joint which is subjected to extreme concentrated loads, resulting in high wear rates
- The Cardan type of UJ joint employs two sets of perpendicular pins, each providing freedom of angular movement, which facilitates smoother transmission of angular loads
- The Cardan type UJ joint is also designed to withstand high axial forces which are dominant in Progressive Cavity Pumps

Material Options

HOUSING COMPONENTS ; Cast Iron, Cast Steel, Cast Stainless Steel,

Fabricated Steel and StainlessSteel

STATOR Natural, Nitrile, High Nitrile, EPDM, Chloro-

 ${\bf Sulphonated\,Rubber, Fluoroelastomer}$

ROTOR : Case Hardened Steel, Alloy Steel HCP, Stainless

Steel UP/HCP

COUPLINGROD : Alloy Steel, Stainless Steel

SHAFT : Alloy Steel HCP, Stainless Steel UP/HCP. Shaft

Sleeve Optional

SPECIAL MATERIAL Other Exotic options including Alloy 20, Haste

alloy also available

Legend

HCP: Hard Chrome Plated UP: Unplated

Sealing Options

SOFT GLAND PACKINGS: Aramid packing -impregnated with PTFE High Temperature Resisting Lubricants • Lubricated PTFE Yarn Packing • Graphited Impregnated Glass Yarn Packing Lubricated with Mineral Oil • Lantern ringoptional.

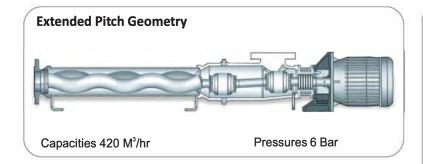
MECHANICAL SEAL: • Single coil Elastomer bellow Seals • Single coil Unbalanced Unidirectional/Bidirectional • Lug Driven • Balanced Seals • DoubleSeals • Flushing / quenching as per API Plan optional.

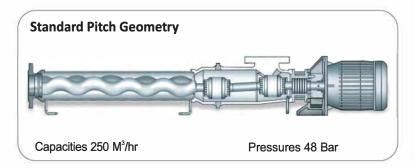
Drive Arrangements

DIRECT DRIVE : Electric Motor • Geared Motor • Gear Box • Mechanical Speed Variator • Petrol/Diesel Engine • Turbines

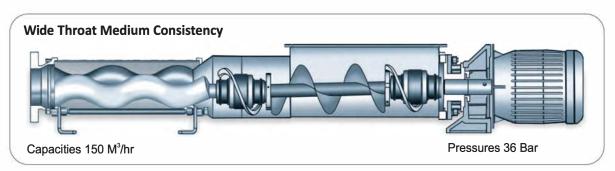
• Hydraulic • Pneumatic

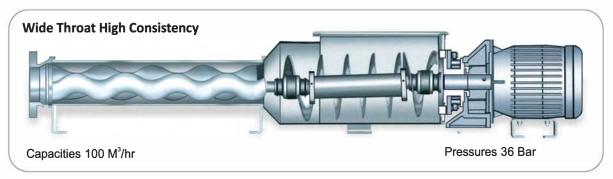
V' BELT DRIVE: Over Head and 'L' Type

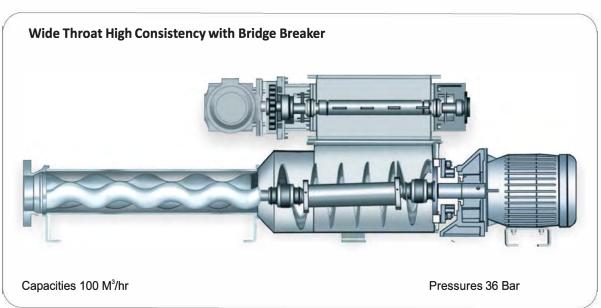














Heavy Duty RE series Capacities upto 100 M³/hr Pressures upto 48 Bar

These Heavy Duty industrial pumps are compact and are designed for high pressures due to equal wall stators which are capable of generating 12 bar per stage.



Robust and Compact GD series

Capacities upto 15 M³/hr Pressures upto 12 Bar

These heavy duty agriculture duty pumps are designed to handle the day to day pumping needs like pumping animal effuluent, salty water, water containing sand or silt, domestic water supply. With excellent suction lift capabilities. These pumps are available in bare shaft and close coupled configurations.



Wine & Beverage DM series

Capacities upto 86 M³/hr Pressures upto 24 Bar

These Heavy Duty semi-hygienic pumps are specifically designed for Wine & beverage transfer applications and can also be used for other Food & Beverages applications. Standard connections include IDF, SMS & RJT.



Submerged Vertical VM series

Capacities upto 420 M³/hr Pressures upto 12 Bar

These vertical pumps are designed to operate with the pumping elements immersed in the product. These pumps are compact and space saving. They are custom designed and manufactured for varying column lengths to suite the sump depth.

Progressive Cavity Pumps Range



These heavy duty pumps are designed for continuous or intermittant duty and are suitable to perform efficiently even for the most difficult fluid handling applications in waste water, chemical and food industries. These pumps are available in bare shaft and close coupled configurations. 6 and 8 stage pumps are also available in select sizes.



These Heavy Duty cost effective pumps use the extended Rotor Stator Geometry and lowe rubbing velocities are ideal for the Sewage & Effluent treatment applications. These Pumps are available in Close Coupled & Bareshaft Configuration.



Wide Throat WM series Capacities upto 150 M³/hr Pressures upto 36 Bar

Wide throat type inlet allows gravity flow of highly viscous (Plastico-viscous) material on to Augur-on-Coupling Rod which pushes the substance to the pumping element. Widethroat pumps with bridge breaker arrangement at the top are designed for handling extremely difficult media with very high solid content and non-flowing properties. Available in Close Coupled & Bareshaft Configuration. Custom designed hopper is possible.



Metering Pump RJ series

Capacities between 0.68–500 LPH Pressures upto 24 Bar

These pumps are developed for low flow applications that demand high accuracies and repeatability. These pumps can handle wide variety of fluids ranging from clean and clear liquids to abrasive, corrosive, viscous and solid laden media. The repeatability accuracy has less than 1% fluctuation. Available in 6 capacities and 3 pressure ranges.



Light Industrial and Agriculture DC series

Capacities upto 8 M³/hr Pressures upto 3 Bar

The most versatile pump for light industrial, agricultural & domestic applications UV resistant Acetyl-co-polymer housing for pump sizes 11, 12 & 31 Cast Iron casing for pump sizes 41& 51. Simple and easy to maintain. Compact and light weight. These pumps are available in bare-shaft and close coupled versions. Standard IEC frame sized motors.



Mini Range MC series

Capacities upto 3.5 M³/hr Pressures upto 3.5 Bar

These pumps are designed for use where low flow or transfer duties in both domestic and industrial applications are required, Excellent suction lifts capabilities up to 8 metres on water. Suitable for a wide range of light industrial applications. Available in close coupled cofigurations only. Standard IEC frame motors.



General Purpose SC series

Capacities upto 12 M³/hr Pressures upto 3.5 Bar

These General purpose pumps are compact and light weight, designed for transfer duties in both domestic and industrial applications. Excellent suction lifts up to 8 metres on water. Suitable for a wide range of light industrial applications.



Roto extra value Pump series to suit all applications



Small Capacity 'RD' Series Pumps

These small capacity Heavy duty pumps are designed for continuous or intermittent dosing or transfer duties. These pumps are available in Close-Coupled & Bare shaft Configuration. 6 & 8 stage pumps are also available in select sizes.

34	Size	D41	D43	D45	D47	D49	D51	D53	D55
ľ	Capacity M ³ /hr	0.11	0.3	0.6	1.6	3.5	6.5	9.5	17
Ì	Pressure Bar	24	48	24	24	24	12	12	6

Viscosities: Upto 30,000 cst Temp.: Upto 150° C Solid Handling Capability: Upto 7%



Medium to Large Capacity 'RM' Series Pumps

These Heavy Duty pumps are designed for continuous duties and are suitable to perform efficiently even for the most difficult fluid handling applications. These Pumpsare available in Close Coupled & Bareshaft Configuration.

		_				_	_		_	_	_	
Size	M50	M52	M54	M56	M58	M60	M62	M64	M66	M69	M72	M73
Capacity M³/hr												
Pressure Bar	48	48	36	36	36	48	24	18	12	12	12	12

Viscosities: Upto 30,000 cst Temp.: Upto 150° C Solid Handling Capability: Upto 7%



Extra Large Capacity 'RL' Series Pumps

These Heavy Duty cost effective pumps use the extended Rotor Stator Geometry and are ideal for the Sewage & Effluent treatment applications. These Pumps are available in Close Coupled & Bareshaft Configuration.

Size	L54	L57	L59	61M	63M	65M	67M	69M	71M	73M	76M
Capacity M³/hr	14	25	42	56	86	114	152	212	272	352	420
Pressure Bar	6	6	6	6	6	6	6	6	6	6	6

Viscosities: Upto 15,000 cst Temp.: Upto 150° C Solid Handling Capability: Upto 7%



Widethroat 'WM' Series Pumps

Widethroat type inlet allows gravity flow of highly viscous (Plastico-viscous) material on to Augur-on-Coupling Rod which pushes the substance to the pumping element. Available in Close Coupled & Bareshaft Configuration.

Size	W54	W56	W58	W60	W62	W64	W66	W69	W72	W73
Capacity M³/hr	7	12	16	28	35	47	57	90	120	150
Pressure Bar	36	36	36	48	24	18	12	12	12	12

Viscosities: Upto 125,000 cst Temp.: Upto 150° C Solid Handling Capability: Upto 12%



Widethroat with Bridgebreaker 'KM' Series Pumps

Widethroat pumps with side paddle (bridgebreaker) arrangement are designed for handling extremely difficult media with very

Size	K54	K56	K58	K60	K62	K64	K66	K69	K72	K73
Capacity M³/hr	5	7	10	17	21	28	34	54	72	100
Pressure Bar	36	36	36	48	24	18	12	12	12	12

Viscosities: Upto 3,000,000 cst Temp.: Upto 150° C Solid Handling Capability: Upto 40%



Wine & Beverage 'DM' Series Pumps

These Heavy Duty pumps are specifically designed for Wine transfer applications and can also be used for other Food & Beverages applications. Standard connections include IDF, SMS & RJT.

Size	Ô	DM51	DM53	54M	DM56	57M	DM58	59M	DM60	DM62	63M
Capacity	M³/hr	6.5	9.5	18	20	31	26	51	46	58	86
Pressure	Bar	6	12	6	24	6	24	6	24	24	6

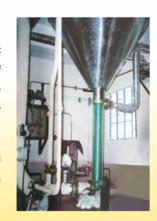
Viscosities: Upto 5,000 cst Temp.: Upto 150° C Solid Handling Capability: Upto 7%



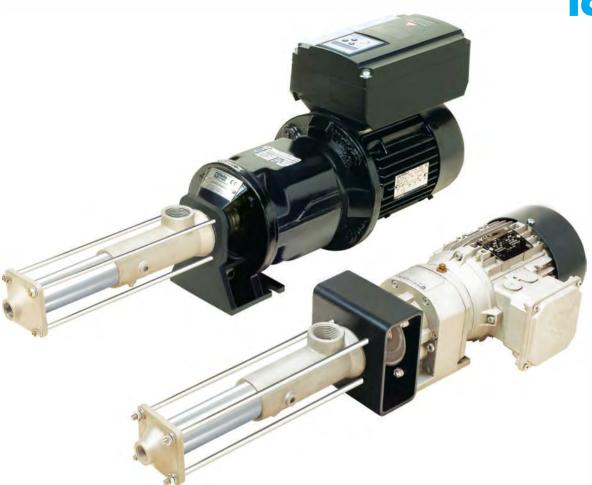
Engineered fluid handling solutions

Backed by over 45 Years of experience and a strong Research & Development infrastructure in providing fluid engineering solutions to a wide spectrum of industries, Roto has the unique ability to offer high-end customised solutions. These include either custom designed pumps to suit a specific pumping application or complete systems.

Roto's vertical pumps are designed to operate with the pumping elements immersed in the product. These pumps are compact and space saving. They are custom designed and manufactured for varying column lengths to suit the sump depth.







The best choice for precise metering applications

RJ series of dosing pumps

Roto RJ series pumps are developed for low flow applications that demand high accuracies and repeatability. These pumps can handle wide variety of fluids ranging from clean and clear liquids to abrasive, corrosive, viscous and solid laden media.

Advantages

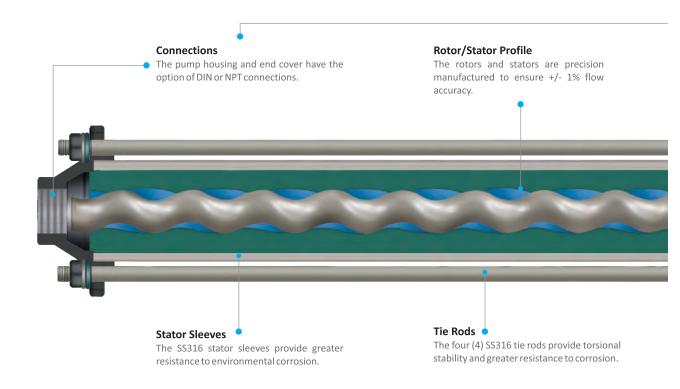
- High dosing accuracies fluctuation ±1%.
- Smooth and non pulsating flow no need of pulsation dampners.
- Low sheer and linear flow can handle sheer sensitive media.
- Single rotating element no valves or gears required.

Capacities: 0.68-500L/h Pressures: Upto 24 bar



RJ SERIES OF METERING PUMPS

Roto RJ Series pumps are for low flow applications demanding high accuracy and repeatability. They can handle a wide variety of fluids ranging from clean and clear liquids to abrasive, corrosive, viscous and solid laden media. The pumps can maintain flow with repeatable accuracy of \pm 1%. The RJ Series is available in 6 capacities (0.68 – 500 l/h) and 3 differential pressure ranges (6,12 & 24 Bar).



ADVANTAGES

- Capacity is directly proportional to speed
- Inherently self-priming
- No internal valves no clogging
- Low NPSH required
- Linear flow with low shear

- Reversible
- Suction lift capability up to 9.5 meter water column
- Easily changeable pumping elements for different capacities
- Simple to operate
- Highly efficient

APPLICATIONS

Roto RJ series pumps are designed to handle a wide variety of fluids for number of applications in industries such as:

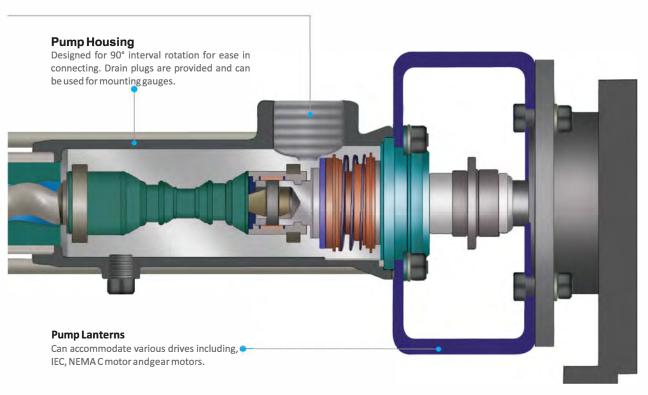
- Wastewater Treatment
- Pulp & Paper
- Chemical Processing

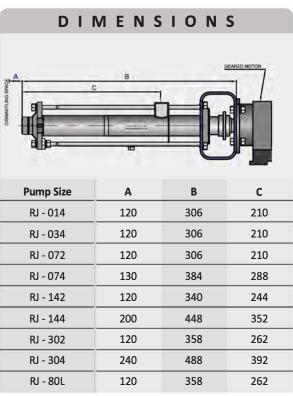
- Pharmaceutical
- Petrochemical
- Petroleum Refining

- Cosmetic
- Mining
- Food

MATERIAL OF CONSTRUCTION

Standard RJ Range pumps are manufactured with 316 stainless steel wetted components and a single mechanical seal. The stator elastomers include; Natural, Nitrile, EPDM, Chloro-sulphonated rubber, HNBR, Viton, and Aflas®. Pumps can be manufactured in various exotic alloys including Hastealloy, Duplex, and Alloy 20 to fit the application.





Available in 1" NPT port connection at Suction & 1/2" NPT connection at Discharge in all pump sizes.

- All dimensions are in mm
 All dimensions & specifications are subject to change without prior notice

SELE	C	TIO	N T	ABL	E
			PRESSU	JRE BAI	2
Pump Size	0	6	12	24	
RJ - 01		7.50	7.20	7.20	6.90
RJ - 03		18.90	18.20	18.10	17.30
RJ - 07	FLOW RATE LPH	45.90	44.10	44.00	42.10
RJ - 14	FLOW	91.40	87.90	87.60	84.30
RJ - 30		180.00	173.00	172.30	166.30
RJ - 80L		500.00	460.00	-	-

Capacities of pump sizes calculated at 500 RPM





G L O B A L L Y THE STEEL OF THE STATE OF TH

not simple re-engineering but intelligent engineering







Roto Pumps jest jednym z wiodących na świecie producentów pomp śrubowych. Doświadczenie obejmuje ponad 40 lat w projektowaniu, wytwarzaniu i dostarczaniu pomp typu PC. Nasza filozofia produkcji to nie proste odwzorowanie, to inteligentna inżynieria, odzwierciedlająca podejście założyciela firmy do obróbki materiałowej. Nic zatem dziwnego, że coraz więcej klientów odkrywa nasze części, przewyższające jakością oryginały.



Opcje materialowe

Rotor	Stal nierdzewna, Stal narzędziowa oraz inne egzotyczne stopy
Stator	Natural, Nitrile, Food Grade White Nitrile, HNBR, EPDM,
	Chloro-Sulphonated Elastomer, Fluoro Elastomer oraz AFLAS®
Other Parts	Stal nierdzewna, Stal narzędziowa oraz inne egzotyczne stopy

Opcje powłok rotorów

Hard Chrome Plating, Rotochrome oraz inne specjalne twarde powłoki

Ponad czter y dekad y doświadczenia

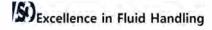
Roto całkowicie rozumie funkcjonalność wszystkich istotnych części, materiałów i krytycznych tolerancji produkcyjnych. Jest to podstawa wysokiej jakości i niezawodnego asortymentu części do pomp śrubowych. Roto jest jednym z niewielu producentów pomp PCP, którzy wytwarzają statory od samego początku aż do ich inspekcji we własnych halach produkcyjnych. Oprócz produkcji własnych mieszanek, Roto wytwarza również we włąsnym zakresie formy, które zostały zaprojektowane tak, aby uwzględniały wyjątkowe wzory skurczów. To, w połączeniu ze ścisłą kontrolą procesu, daje w wyniku statory o niezrównanej dokładności wymiarowej.





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Roto@work















Applications

Water and Waste water

Digested Sewage Sludge, Activated Sludge, De-Watered Effluent Sludge, Bio Sludge, Industrial Effluents, Poly Electrolytes, Flocculants, Oily Sludge, Oilwater separation, Lime dosing, Alum Feed, Scum

Sugar

Sulphited Sugar Juice, Massecuite, Magma, Melt, Molasses, Phospheric acid, Milk of Lime, Flocculant Dosing, Effuluent Sludge

Pulp and Paper

Medium and High consistency Pulp, Titanium dioxide, Sodium Silicate, Alum, Latex, Kitchen Coating Slurry, Glue, Black Liquor, Calcium carbonate, Starch slurry, cooked starch, colour, Resin

Detergents Cosmetics & Toiletries

Creams, Shampoo, Heavy liquid emulsion, Lotion concentrate, Selenium liquid, Liquid make up, Tooth paste, Soap solution

Oil and Gas

Drilling mud, Oil sludge, skimming, waste, Skimmer oil from API, Oil & wax mixture, Multiphase fluid transfer, Crude oil & water transfer, Offshore oil transfer, Produced water, Oil Water emulsion, Chemicals

Paint & Varnish

Acrylic solution, Pigment slurry, Varnishes, Resins, Latex, Pigmented paints, Oil paste, Lacquer, Solvents, Paint premix

Food and Pharma

Oil, Cheese, Milk, Yogurt/Curd, Lactose Paste, Cream, Condensed/ Concentrated Milk, Ice-cream, Soy bean concentrate, Taco sauce, Dough, Wheat milk slurry, Yeast, Cake mix, Chocolate, Honey, Syrups, Bulk drug slurries Ointments & Balms, Selenium liquid

Breweries, Wineries & Distillaries

Spent grain & Yeast transfer, Beer & Wine, Decanted settlings, Diamatacious slurry, Fruit bunch with / without stock, Heavy de-juiced red wine mash, Thick mashes, Thick juices & cider, Must, Spent hops, Spent wash, Wet crushed malt

Mining

Coal water mixtures, Clay & Mineral slurries, High pressure wash, Dirty water, Cement grout/Grout mix, Explosive mix transfer & filling, Mortar with fine aggregates, Water spray for dust suppression, Flocculant

Marine

Mud, Brine, Bilge water, Sludge, Sewage, Waste oil

Construction

Wall plastering, Fine aggregate mortar, Sealing compounds, Dispersion plaster, Floor screed, Interior & Exterior plaster, Plaster & Gypsum, Cement & Sand mixture, Cement slurry

Ceramio

Clay coatings, Ceramic slurry, Clay slip, Fire clay suspension, Filter press suspention, Glaze, Iron oxide slip, Kaolin, Slaked lime, Bentonite slurry, Color pasto.

Agriculture

Pumping Salty water, Effluent field irrigation, Pumping animal effluent, Stock and domestic water supply, Pumping water containing sand or silt, Transfer from dams or creeks, Bio sludge, Animal feed transfer, Surface water transfer for cattle, Preparing & conveying pasty animal feed, Molasses animal feed

Edible Oil

Cooking oil, Soy Bean concentrate, Peanut butter, Refined oil Lecithin, De odorised oil, Oil with wax, Fatty acids, Gums, Acid oil, Soapstock, Crude Palm oil, Bleached palm oil, Mustard oil, Soap Stock

Chemicals

Acetone, Alum, Alumina slurry, Barium carbonate slurry, Benzene & polymer, Boric acid solution, Plutonium oxide, Polyphosphoric acid, Sodium bisulfate, Sodium peroxide, Terephthalic acid, Zinc oxide, Zinc slurry, Zinc & Nickel hydrates

Man made fibre

Viscose, Viscosev flakes, Pulp with Sodium Hydroxide, Fixing Agents, Bleaching Agents, Flocculants, ETP sludge



Melbourne Office & Warehouse



Manchester Office & Warehouse



Roto Pumps North America, Inc





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