CRAPO TECH

Disintegrator

Stainless Steel Cutting Pump

Disintegrator

Overview

This device is a wet type cutting pump with innovative functions used to cut solids contained within liquids to a uniform state, and then transfer the resulting discharge as a homogeneous liquid mixture. Its outstanding cutting capabilities and durability for even the toughest worksite have been regarded as extraordinary and reliable in every regard. Custom-made orders using specific materials are also possible to suit your application.

Features

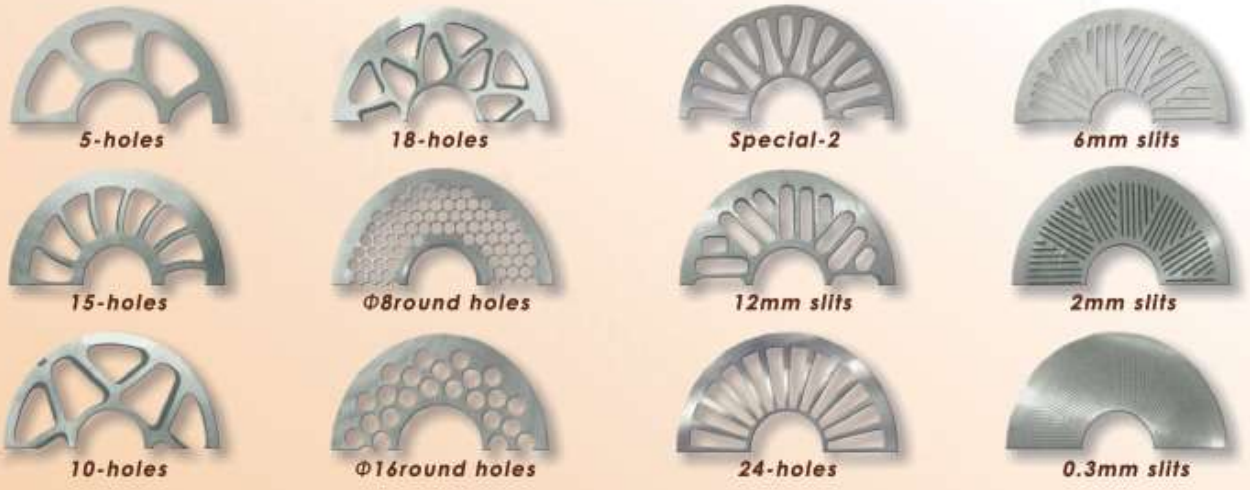
(1) Provides cutting and pump pressure feeding at the same time.
The cutting impeller features cutting capabilities, as well as a pressure feed function to allow it to operate as a pump. For high-lift transfers, select models with a built-in pressurized impeller for pressure feeding.
The device can be installed directly to the worksite line, thus simplifying processes for more economical operation.

(2) Stunning cutting capability
The mechanism that provides three stage cutting is comprised of four parts: cutting blade, cutting impeller, shroud ring and grid. The blade of each of the four parts are made from top class materials with an ideal balance between hardness and ductility.

(3) Cutting to a specified particle size.
Models can be selected to cut to a specific particle size through a combination of cutting impeller blades, grid hole size and flow rate.

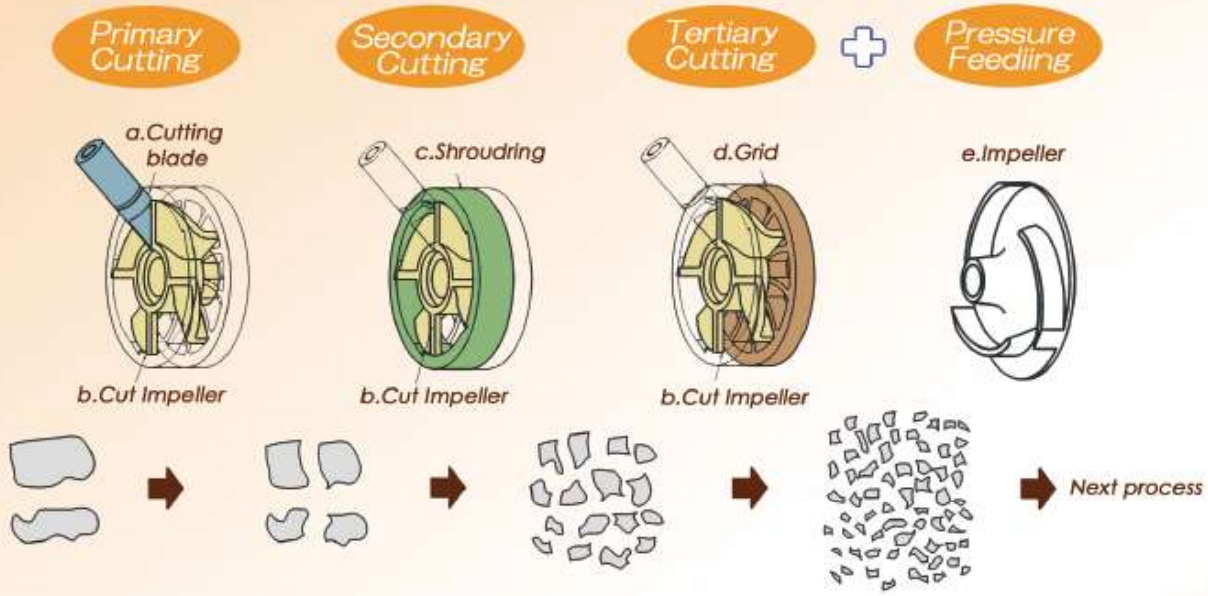
(4) Provides cutting and pressure feeding of high-concentration and high-viscosity materials.

(5) Simple maintenance.
The clearance between the rotating blade and fixed blade can be adjusted to the optimum position easily from outside the device.

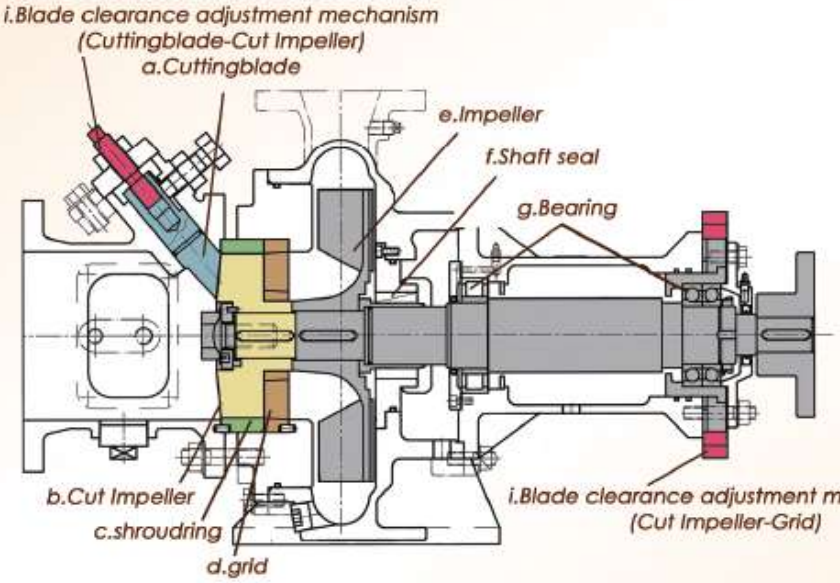


Cutting Mechanism

The crushed material is crushed in three stages



You can watch the video on youtube.



a.b.c.d.cutting section
Breaks up and cuts materials in three stages.

e.Impeller
Pressure feeds cut materials to the next process.

f.Axial seal
A water injection mechanical seal or non-water injection mechanical seal can be used as required.

g.Shaft
The main shaft is supported firmly with rolling bearings and ball bearings.

h.Cutting impeller clearance adjustment mechanism
The clearance between the cutting impeller and the grid - the core components of the cutting mechanism - can be adjusted easily without having to dismantle the pump.

i.Cutting blade clearance adjustment mechanism
The clearance between the cutting blade and the cutting impeller- the core components of the cutting mechanism - can be adjusted easily without having to dismantle the pump.

KDA125MS/KD200MS/KDA300MS Cutting parts

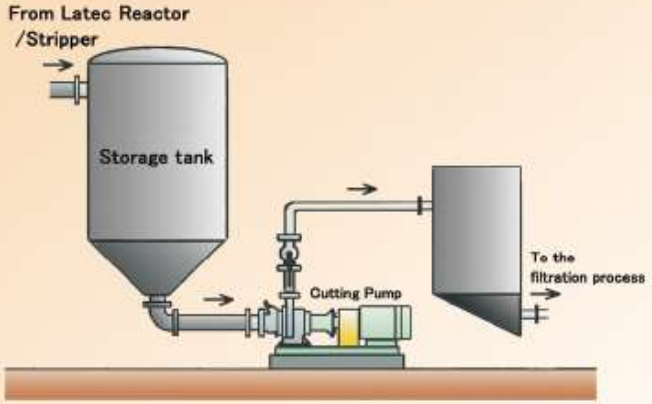
KD50MS(H)/KD80MS Cutting parts

You can select the shape according to your application.

Application example

Field	Application, Purpose	Example of cut materials
Biomass	Encouraging methane fermentation, Reventing blocking	Raw garbage, Livestock excrement, Distilled spirit waste liquid
Recycling	Reducing volume, regulating particle size, Cleaning	Plastic bottles, Bumpers
Petroleum	Cutting, dissolving and transferring lumps of material	Synthetic resin, Synthetic rubber, polymers
Chemical	Regulating product particle size Encouraging dissolution, Cutting lumps	ABS resin, Polycarbonates Adhesives, Latex
Fisheries	Cutting, Mixing and transferring material	Fish intestines, Seaweed
Foodstuff	Extracting ingredients, Regulating cut particle size	Soy beans, Perilla leaves, Seeds, Fruits, Fats and oils
Medical	Achieving uniform products	Chemical fertilizers, Feed, Organic slurry
Construction	Cutting and dissociation	Plasterboard, Paint residue
Paper manufacturing	Cutting of processed lumps	Used paper, Paper pieces
Water treatment	Preventing blockages, Achieving more uniform treated liquid	Human waste, Septic tank sludge, Sewage, Wastewater

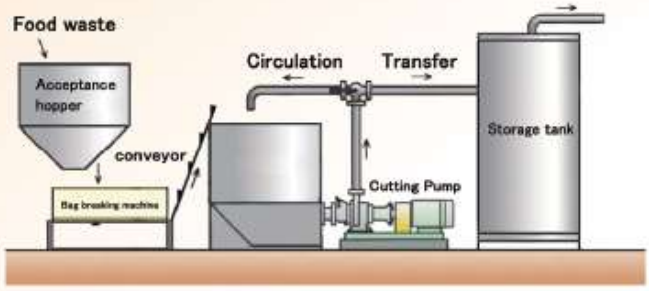
Manufacture latex



Customer : *Chemical company*
Purpose : *Prevents blockage of pipelines and transfer pumps due to the fall of the latex film that has grown on the tank wall surface.*
Recovery of latex liquid remaining in the film.
Method : *The latex in the tank is evacuated with a flushing cooler after the crushing pump.*
Effect : *The latex film grown in the tank no longer blocks the pipeline.*
Succeeded in recovering the latex liquid remaining in the film.

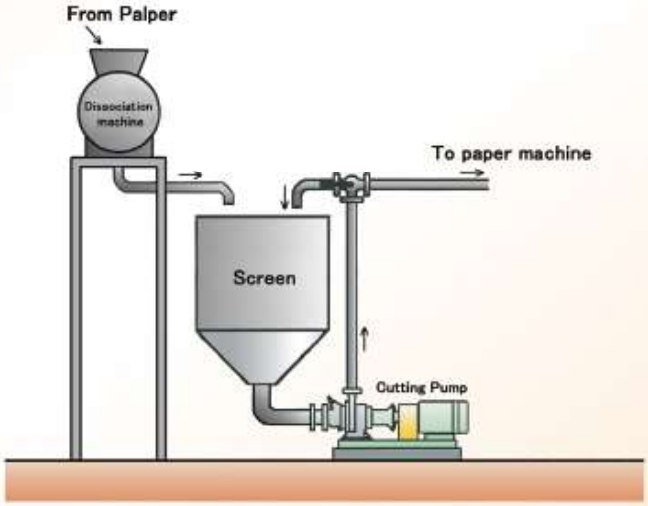
Food waste

①Biogasification plant
②Liquid feed plant



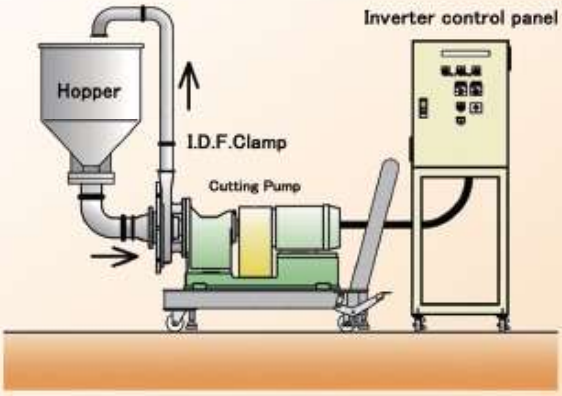
Customer : *Food waste treatment plant*
Purpose : *①Promotion of biogas generation*
②Liquid feed homogenization
Method : *A crushing pump is installed in the slurry tank to crush and transfer food waste.*
Effect : *①Fermentation is promoted and methane gas generation efficiency is improved.*
①②The homogenization prevented blockage in the pipeline and suppressed residual and separation in the tank.
②The added value of the product has improved.

Paperboard manufacturing



Customer : Papermaking
Purpose : Reduction of raw material loss
Method : The waste paper discarded on the screen in front of the paper machine is crushed with a crushing pump and returned to the screen again.
Effect : Succeeded in reducing raw material loss and saving pulp used.

Tea leaf crushing

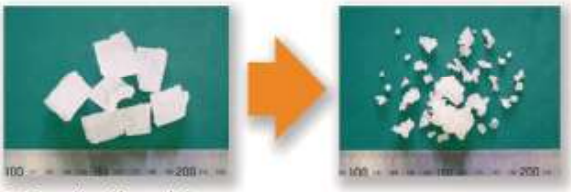


Customer : Beverage maker
Purpose : Finely crush tea leaves, vegetables, etc. to promote extraction.
Method : Put the raw material and water (or hot water) in the hopper and crush it by circulation.
Effect : Tea leaves, vegetables, etc. become finer and are effective in promoting extraction. It was possible to shorten the extraction time and increase the production volume.

Examples of cutting

■Synthetic resin

■Urethane



■Synthetic rubber

■Nameplate

■Plastic container

■Plastic bag

■Cloth

■Paper diapers

■Mochi

■Soy

■Rice

■Shiso

■Vegetable waste

■Sweet potato shochu waste liquid

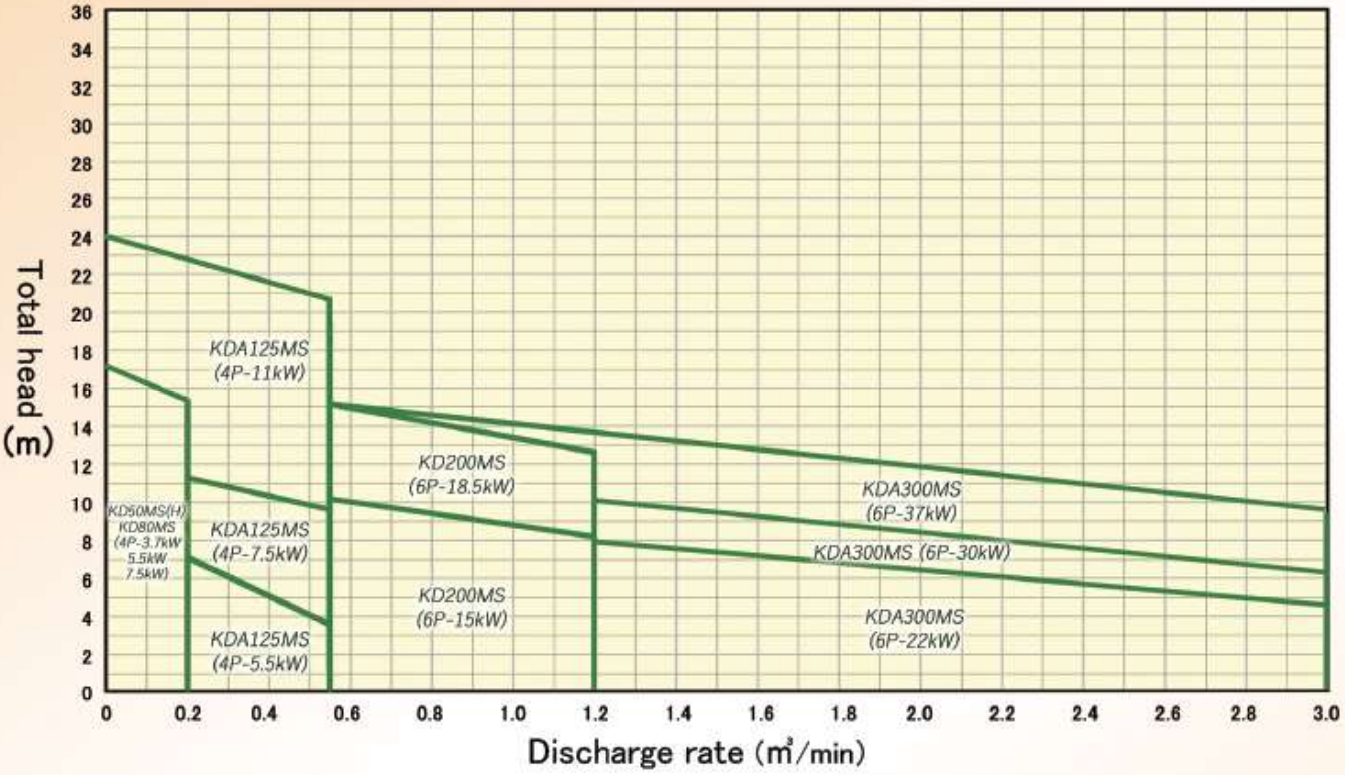
■Shellfish

■Bumper

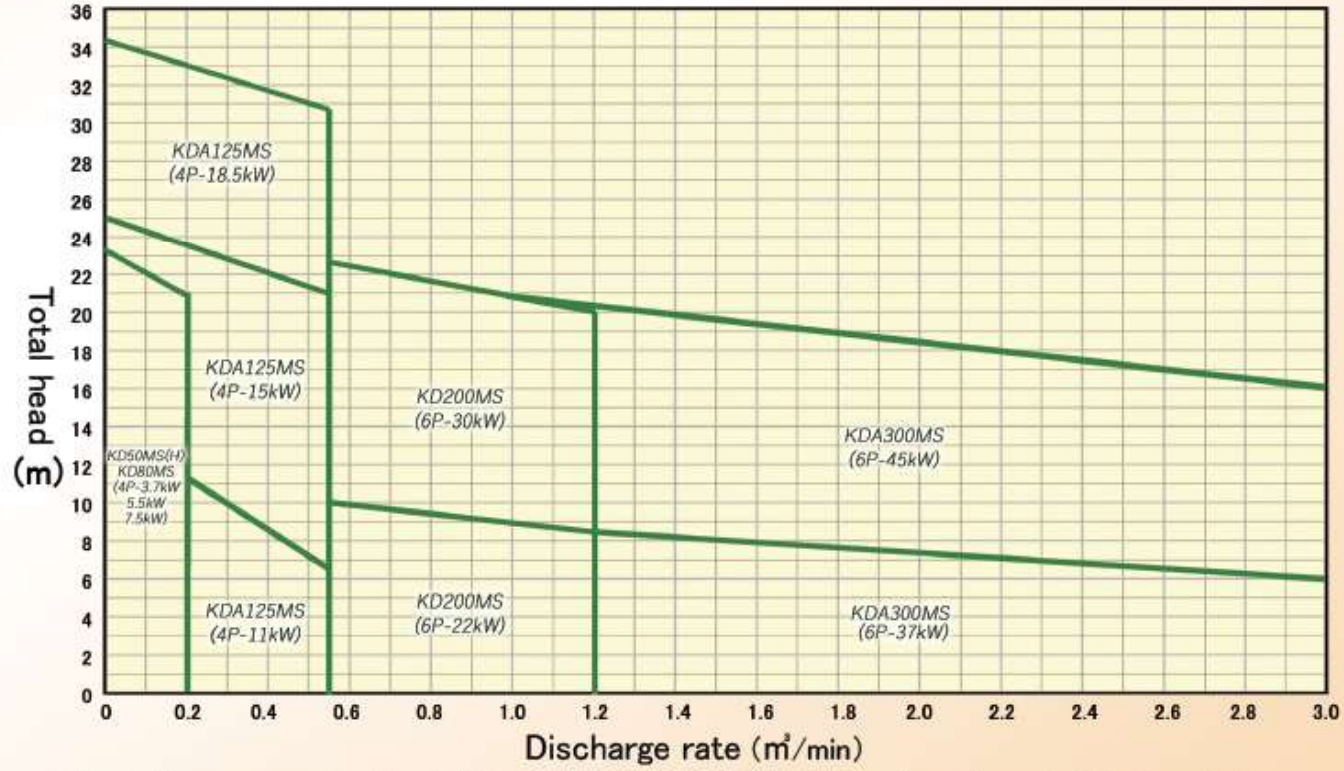
• All photos are dried.

KD50MS(H) / KD80MS / KDA125MS / KD200MS / KDA300MS

50Hz



60Hz

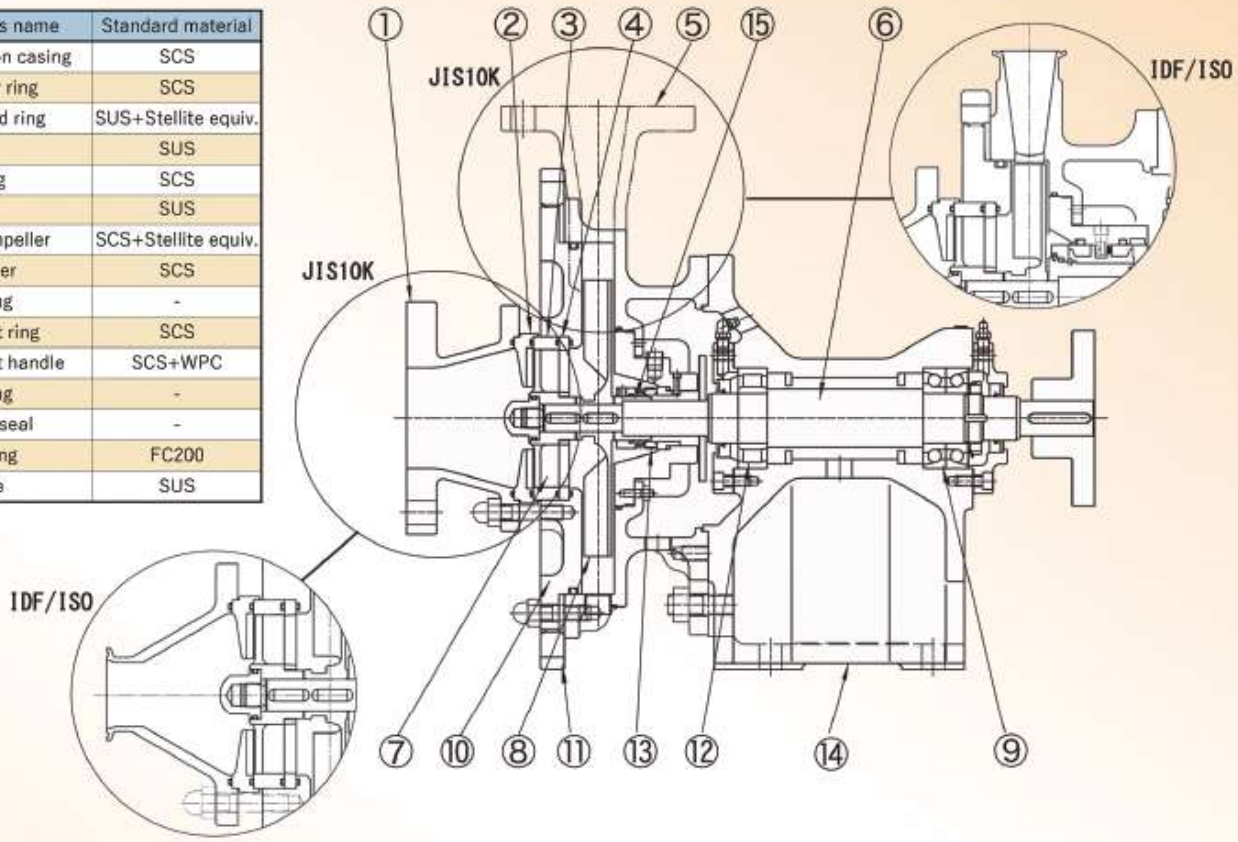


■*The crushing pump you select (head, discharge volume, power) will vary depending on the material to be crushed, the properties of the liquid being treated, and the crushing pump specifications (cut impeller, type of grid), etc. Please contact us for details.*

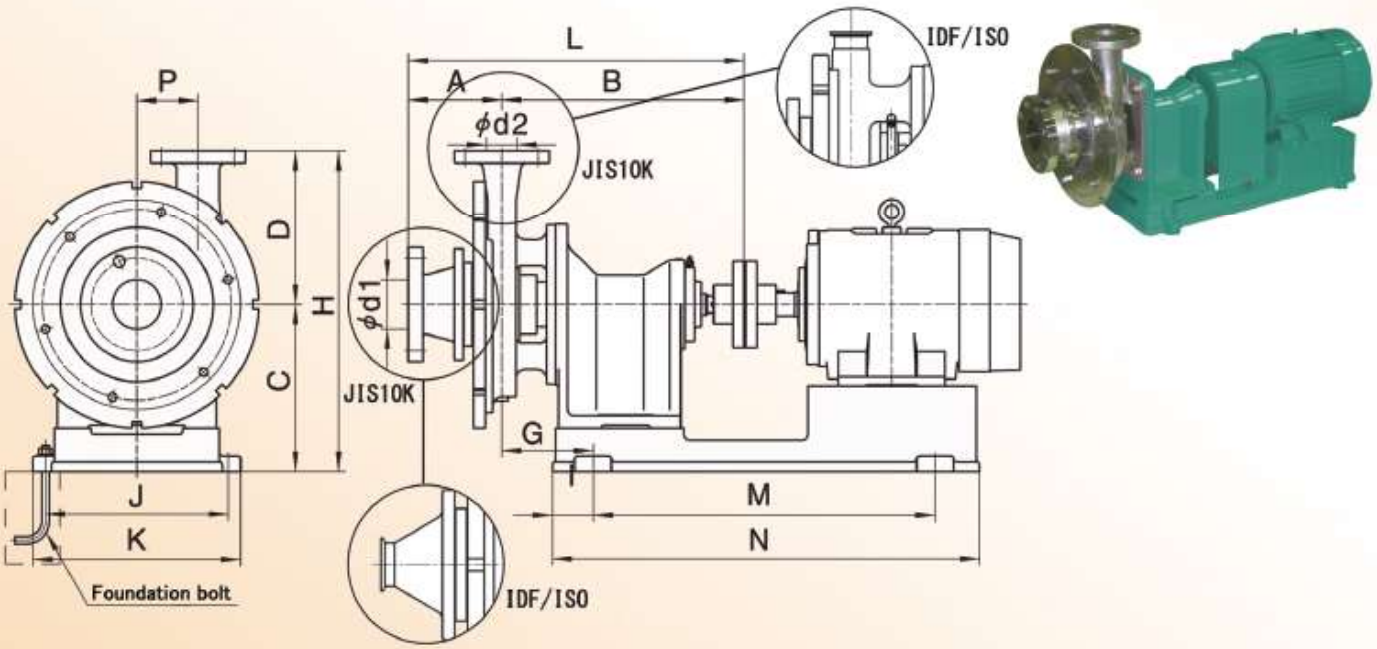
KD50MS(H)/KD80MS

Structure view

No.	Parts name	Standard material
①	Suction casing	SCS
②	Cutter ring	SCS
③	Shroud ring	SUS+Stellite equiv.
④	Grid	SUS
⑤	Casing	SCS
⑥	Shaft	SUS
⑦	Cut impeller	SCS+Stellite equiv.
⑧	Impeller	SCS
⑨	Bearing	-
⑩	Adjust ring	SCS
⑪	Adjust handle	SCS+WPC
⑫	Bearing	-
⑬	Shaft seal	-
⑭	Housing	FC200
⑮	Sleeve	SUS



External view

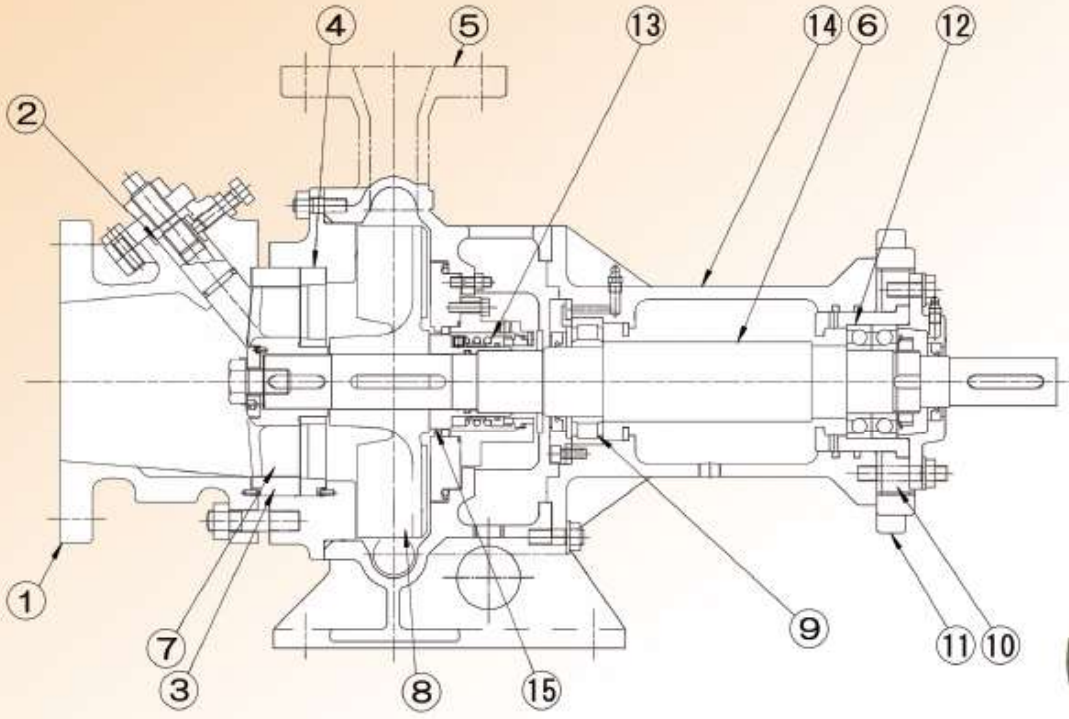


Model	Motor		Diameter		A	B	C	D	G	H	I	J	P	K	M	N	L	Foundation Bolt	Weight(kg)
	Poles	kW	ϕD1	ϕD2															
KD50MS(H)	4	3.7	50	50	153	397	270	250	150	520	67	300	100	340	560	700	550	4×M12×160	175
KD80MS		5.5																	
		7.5	80																

・This dimension is based on a standard motor. Please contact us as it depends on the motor used for reference dimensions. *(units : mm)*

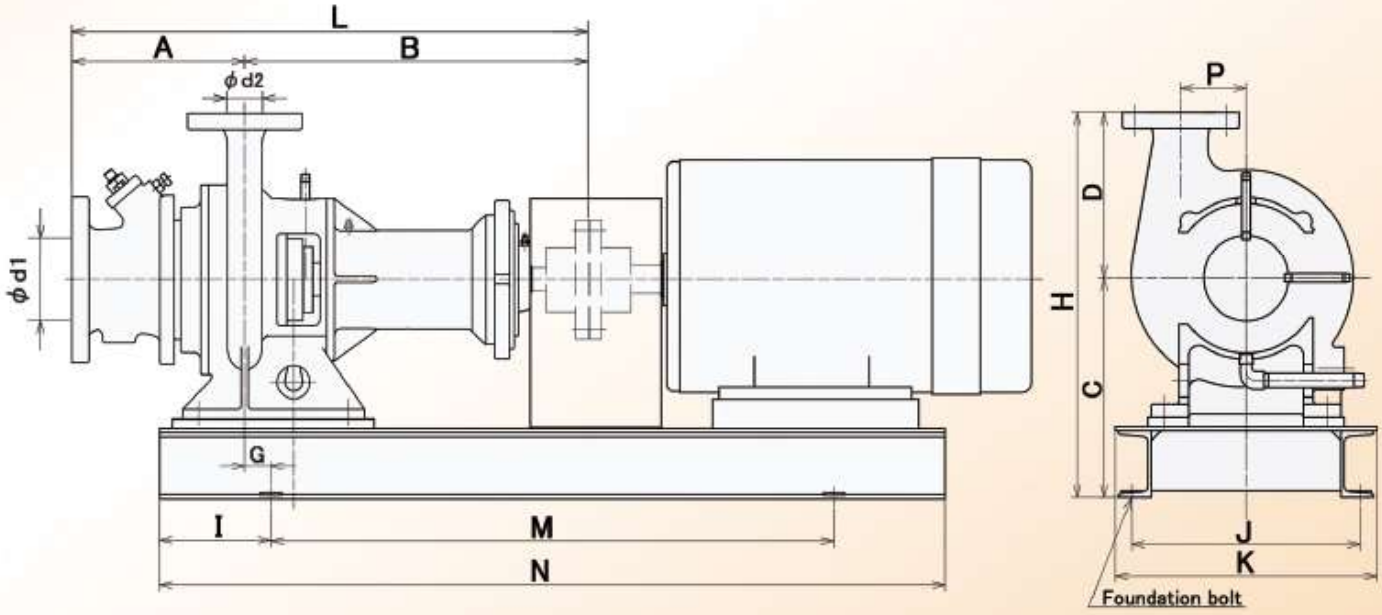
KDA125MS/KD200MS/KDA300MS

Structure view



No.	Parts name	Standard material
①	Suction casing	SCS
②	Cutting blade	SUS+Stellite equiv.
③	Shroud ring	SCS+Stellite
④	Grid	SUS
⑤	Casing	SCS
⑥	Shaft	SUS
⑦	Cut impeller	SCS+Stellite equiv.
⑧	Impeller	SCS
⑨	Bearing	-
⑩	Adjust ring	AC4C
⑪	Adjust handle	FC200
⑫	Bearing	-
⑬	Shaft seal	-
⑭	Housing	FC200
⑮	Sleeve	SUS

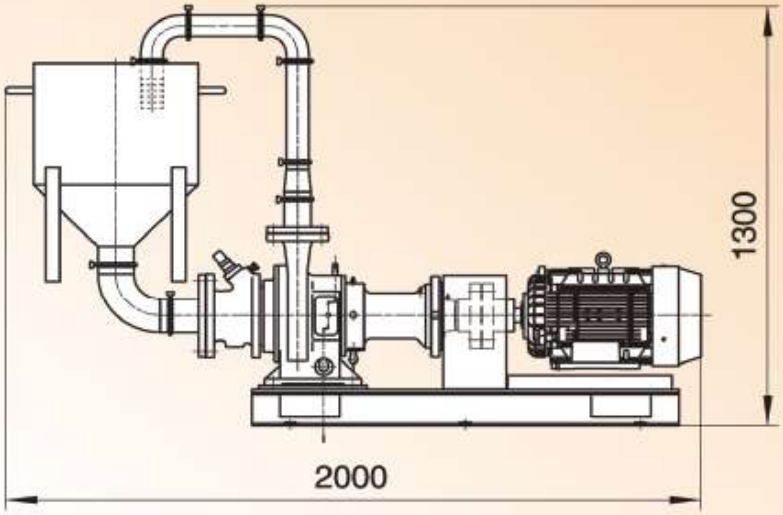
External view



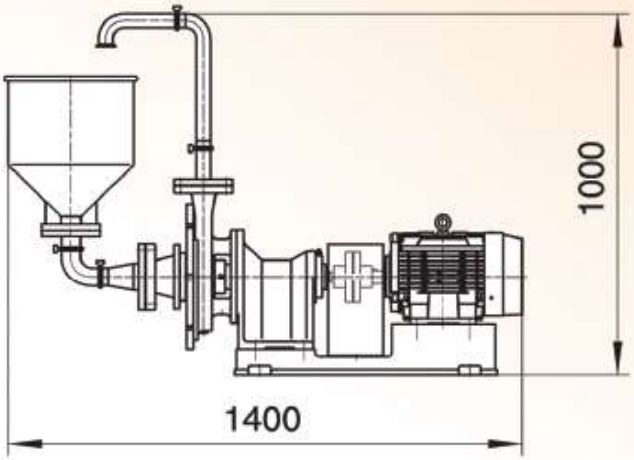
Model	Motor		Diameter		A	B	C	D	G	H	I	J	P	K	M	N	L	Foundation Bolt	Weight(kg)
	Poles	kW	ϕd1	ϕd2															
KDA125MS	4	5.5 , 7.5 11 , 15 18.5	125	65	263.5	524	330	250	55	580	75	285 400	100	335 335 450	900 1030 1050	1050 1180 1200	787	4×M16×200	260
KD200MS	6	15,18.5 22,30	200	100	368	678	400	300	45	700	75	500	140	550	1050 650	1380 1450	1046	4×M16×200 6×M16×200	490
KDA300MS	6	18.5~45	300	150	426.5	682.5	437	375	32	812	150	600	157	670	650	1600	1109	6×M16×200	640

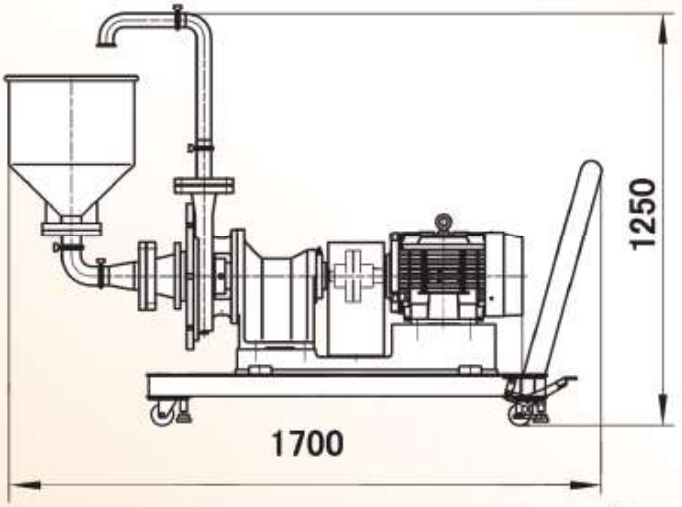
- This dimension is based on a standard motor. Please contact us as it depends on the motor used for reference dimensions. *(units : mm)*

KDA125MS



KD50MS(H)/KD80MS





unit:mm

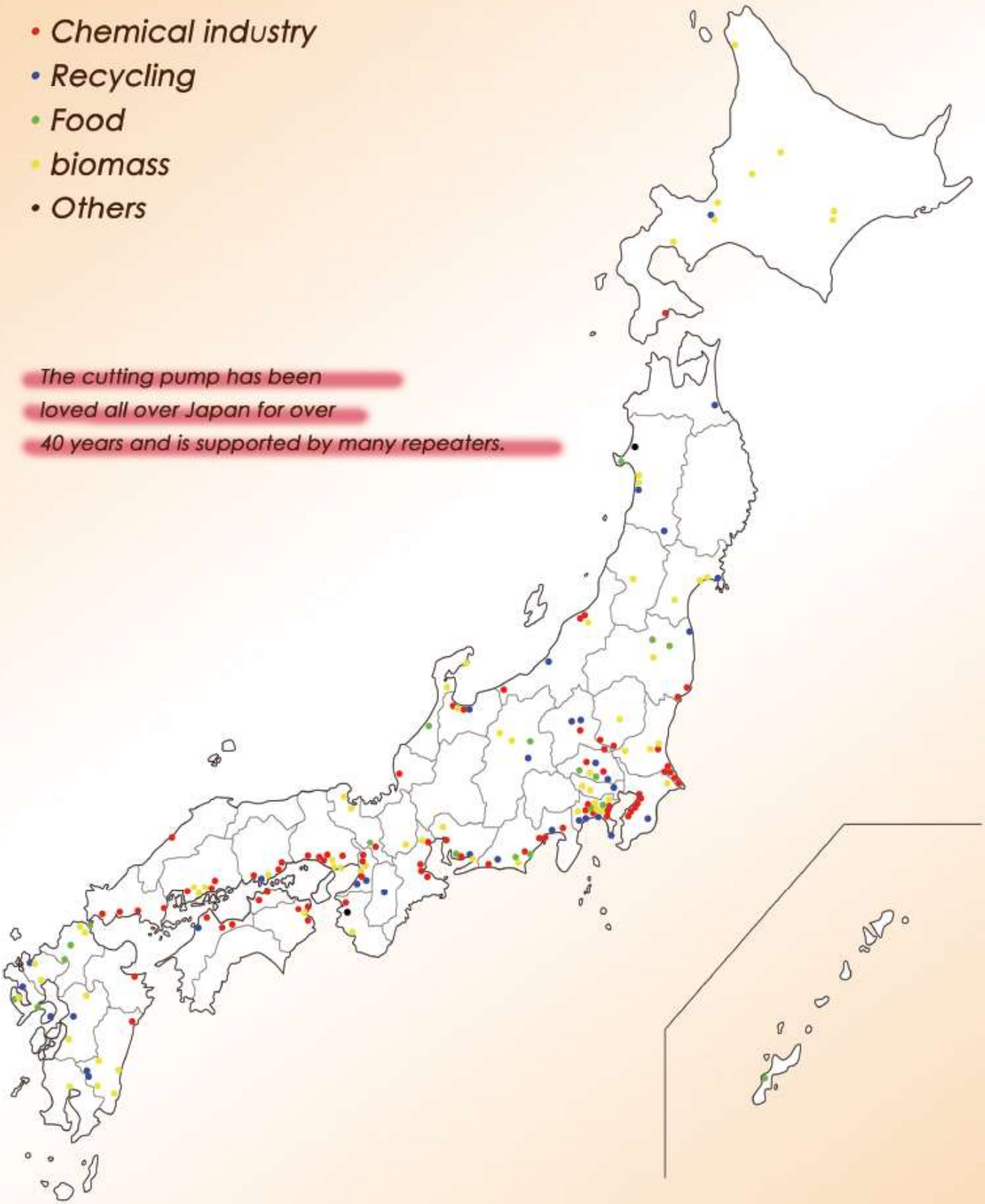
KDA125MS

KD80MS

- A demo test machine is available.
- Please contact us for details.

Delivery record

- Chemical industry
- Recycling
- Food
- biomass
- Others



The cutting pump has been loved all over Japan for over 40 years and is supported by many repeaters.

Overseas delivery record

United States, India, China, Korea, Malaysia, Taiwan, Thailand, Singapore, etc.

History of Pump Business

1959 : Technical tie-up between Komatsu and SULZER-BROTHERS (Switzerland)

1971 : Transferred production and sales to Komatsu Parts Co.,Ltd.(which later became the Komatsu Zenoah Atsugi Plant

1978 : Transferred production and sales to the Komatsu Zenoah Tachikawa Plant

1984 : Developed the human waste high-lift disintegrator series and the industrial disintegrator series

1985 : Terminated technical collaboration agreement with SLUZER

1988 : Developed new disintegrator KD125, KD150 and KD200

1991 : Developed the industrial disintegrator KD200MS

1994 : Developed the industrial small disintegrator KD50MS

1998 : Developed the industrial high-lift small disintegrator KD80MS

2000 : Began production at the Kawagoe Plant after transferring plants

2002 : Developed vertical disintegrator KDV150

2005 : Developed scum disintegrator KDS150

2007 : Zenoah Pump business launched as a result of split-up of Komatsu Zenoah
Changed name to Husqvarna Zenoah Co. Ltd in December of the same year

2008 : Developed the underwater disintegrator ZDS100-7.5
Began sales of the sludge transfer pump BSZ and PSZ

2014 : Development of high-efficiency pressurized impeller for KD125, KD150, KD200

2015 : Developed new disintegrator KDVA125 and KDVA150

2016 : Developed new disintegrator KDA8

2017 : Developed new disintegrator KDA300

2018 : Developed new disintegrator KDA300MS

2019 : Developed new disintegrator KDA125 , KDA150 , KDA200

2021 : Established as Zenoah Environment Equipment Co., Ltd. due to the spin-off of Husqvarna Zenoah Co., Ltd

2024 : Developed new disintegrator KDA125MS

2025 : The company name was changed to Crapotech Inc.
Moved to new building [Head office (Sayama City, Saitama) / Factory (Tsurugashima City, Saitama Prefecture)]

Other disintegrators

Cast iron type

Discharge : up to 3㎥/min

Total head : up to 37m

Intake diamater : 125 to 300A

KDA

• Units are SI units based on the International System of Units. • Please note that the specifications of this machine are subject to change without notice due to improvements. • The photos shown may differ from some vending machines.
• For details on precautions when using this unit, see the instruction manual. • The information given is as of May 2025.

CRAPO TECH Inc.

https://crapo-tech.co.jp/

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