Product spesifications

Model name / Product	UZ-SM1 / Sealing Mixer UZU
Max. toruque	0.2N･m
Recommended Pressure	61 kPa to ambient pressure (gage pressure：-40kPa to 0kPa)
Number of revolutions	2 to 450 RPM
Dimensions	Main unit：Φ72×255mm Controller：80×188×52mm ※ Stirring rod and cable excluded
Weight	Main unit：approx. 1.2kg Controller：approx. 500g ※ Stirring rod and cable excluded
Warranty period	1 year

Options

Part No.	Product name
HS-0-01	High-loadable PTFE stirring rod 110 mm（for 200 to 500 mL flask）
HS-0-02	High-loadable PTFE stirring rod 175 mm（for 500 to 1 L flask）
HS-0-03	High-loadable PTFE stirring rod 250 mm（for 2 to 3 L flask）
HS-0-04	High-loadable PTFE stirring rod 320 mm（for 5 L flask）
HS-0-05	High-loadable PTFE stirring rod 360 mm（for 10 L flask）
MG-0-23	Tapered joint with different diameter ⅋ 29/42 → ⅋ 34/45
MG-0-24	Tapered joint with different diameter ⅋ 29/42 → ⅋ 45/50
MG-0-J	Spacer (common) (for φ8 general purpose shaft)
MG-0-K	Cap (common) (for φ8 general purpose shaft)

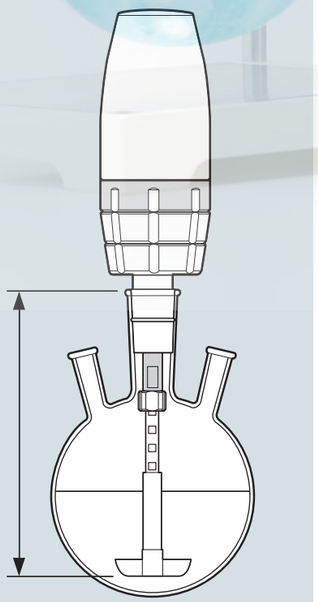
A hollow shaft is used, and the length of the stirring rod is adjustable. Please purchase the required stirring rods by referring to the table below. If you would like to check the operations, demonstration stirring rods are available.

Part No.	Distance from the fitted top surface (Indicated by the arrow on the right)	Width of stirring impeller	Adjusting interval
HS-0-01	127 to 177 mm	50 mm	Per 5 mm
HS-0-02	167 to 257 mm	60 mm	Per 10 mm
HS-0-03	232 to 322 mm	80 mm	
HS-0-04	312 to 402 mm	120 mm	
HS-0-05	352 to 442 mm		

Demonstration

If you would like to check the operations, demonstration units and optional parts are available. For more information, please contact Nakamura Scientific Instruments Industry Co., Ltd. or your dealer.

Distance from the fitted top surface



NEW

Option set for

Small tapered joint UZ-0-SD

For mixing 25 to 50 mL flasks

Correspondig to ⅋ 15/20, 15/25

For higher vacuum and higher torque

Magnetic coupling seal for stirrer

MIGHTY MAG SHIEL

Best partner for flask stirrers

Secure sealing
Proper mixing

Chemical / heat resistant PTFE / SUS316 is used. It can be used with your stirrer.

※An stirrer is required.

Manufacturer

Nakamura Scientific Instruments Industry Co., Ltd.
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Distributor

2016.8

あなたの“欲しい”を、世界から

GloboLab

SEALING MIXER UZU

Made in Japan

Sealing and mixing a flask with one unit

Stirrer for Flask Sealing Mixer UZU

Designed for Flasks

GOOD DESIGN

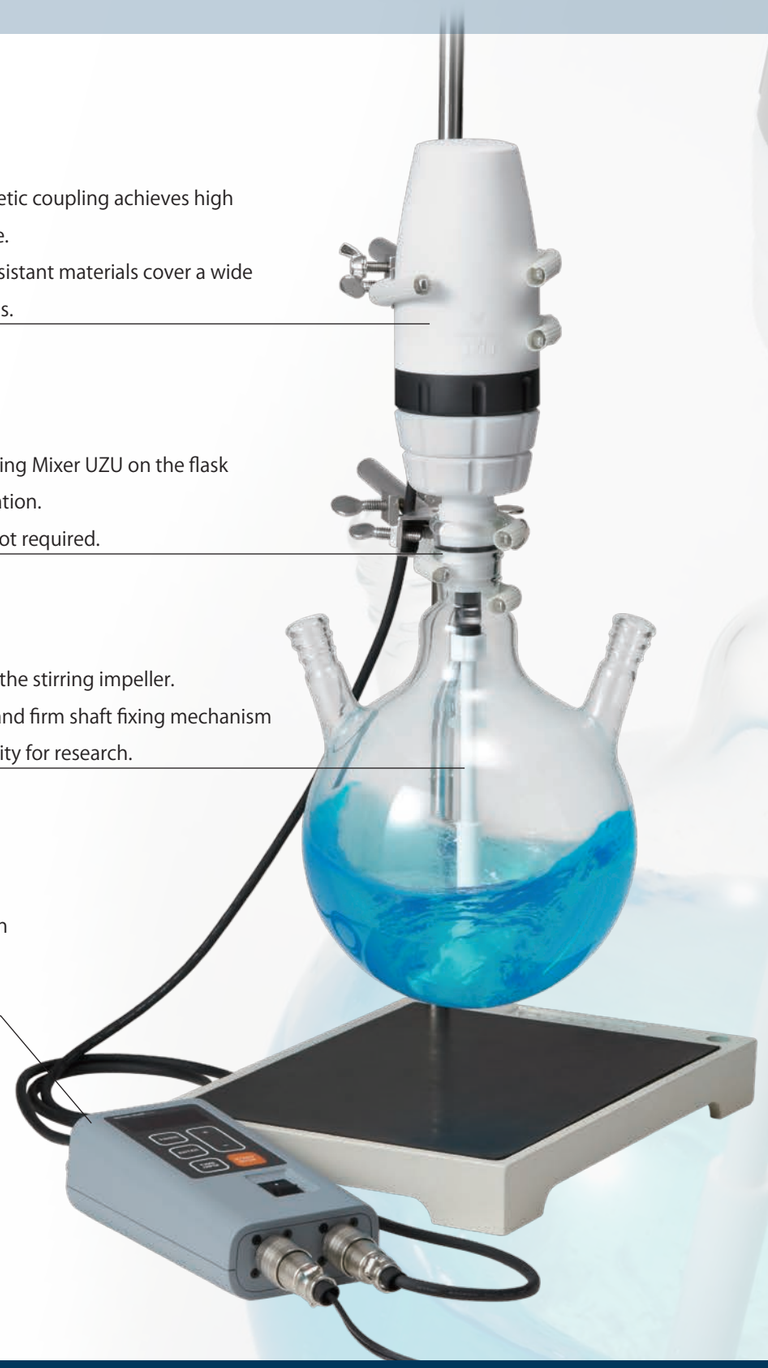
The Sealing Mixer UZU is for researchaers who need stirrers for flasks.
The compact and light weight body offers both mixing and sealing.
The Sealing Mixer UZU provides high reliability and usability to
support your research and development.

The disc type magnetic coupling achieves high sealing performance.
Chemical- / heat- resistant materials cover a wide range of applications.

Just setting the Sealing Mixer UZU on the flask enables easy installation.
Shaft alignment is not required.

Stable mixing using the stirring impeller.
The satable mixing and firm shaft fixing mechanism provide better stability for research.

The stirrer main unit and operating section are separeted, enabling operation with the draft chamber door closed.



Exploded view

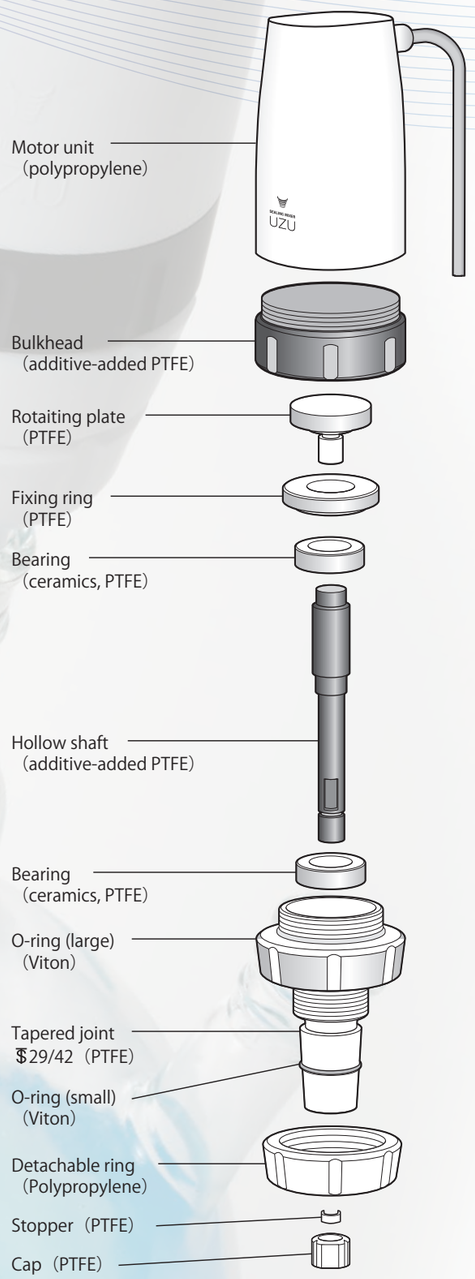


Table of chemical resistance

Chemicals / Materials	Polypropylene	Viton	Ceramics	PTFE
Benzene	○	○	◎	◎
Toluene	△	○	◎	◎
Ethanol	◎	◎	◎	◎
Methanol	◎	○	◎	◎
Aceton	◎	◎	◎	◎
Carbon tetrachloride	×	◎	◎	◎
Naphtha	○	◎	◎	◎
n-propyl alcohol	◎	◎	◎	◎
Chloroform	△	△	◎	◎
Hydrogen peroxide (30%)	◎	○	◎	◎
Gasoline	△	◎	◎	◎
Machine oil	○	◎	◎	◎
Ammonia	◎	◎	◎	◎
Heptane	×	○	◎	◎
Methyl ethyl ketone	◎	△	◎	◎
Formaldehyde	◎	◎	◎	◎
Sodium hydroxide	◎	◎	◎	◎
Phenol	◎	◎	◎	◎
Hydrochloric acid (20%)	◎	◎	◎	◎
Dilute nitric acid (10%)	○	○	◎	◎
Sulfuric acid (60%)	○	○	◎	◎
Conc. hydrochloric acid (36%)	◎	△	◎	◎
Conc. nitric acid (70%)	△	△	◎	◎
Conc. sulfuric acid (98%)	○	○	◎	◎
Strong alkari	◎	◎	◎	◎
Weak alkari	◎	◎	◎	◎

◎ : No effect ○ : No effect for use
△ : Slightly incompatible × : Incompatible

※ The list indicates a general property of each material.
It may vary depending on the temperature or pressure of operating environment.

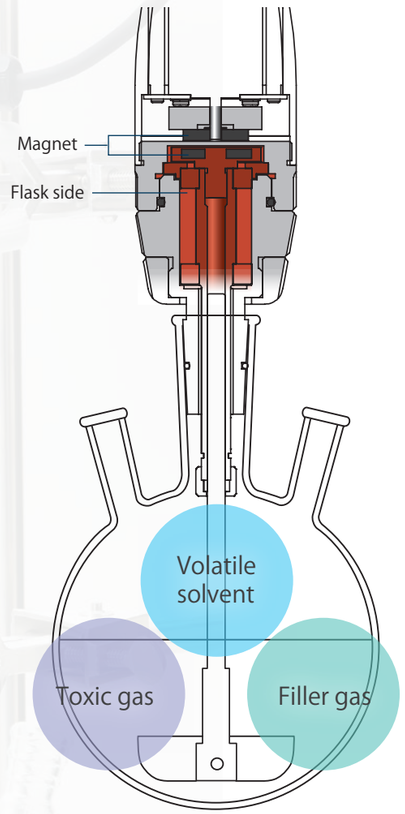
1. A magnetic coupling provides high sealability

A magnetic coupling is used for power transmission from the motor

The bulkhead and the O-ring of UZU enable sealed mixing of the flask. Non contact rotaiting of the stirring rod with a magnetic force provides high sealability. It is suitable for experiments using volatile organic solvents and for mixing filling gas in the flask.

The drive parts are not in contact with the O-ring. Therefore, a deterioration in sealability due to wear of the parts will not occur. Leakage is avoided, even with long operation, and generating abrasion powder is prevented.
This unit provides reliability and safety for laboratoory work.

Diagram of magnetic coupling and sealing functionality



Stepping motor used as a power source.

As a commutator is not used, neither electrical discharge nor metal power is generated. Viscosity change during mixing is not a concern since the number of revolutions does not change with the load fluctuation.

2. Stable mixing using the stirring impeller

Mixing the fluid including grains

Mixing the high viscosity fluid

Mixing the deposit

Open / close stirring impeller enables stable mixing.

Sealablity inside the flask and experiment reproducibility are both achieved. While a magnetic stirrer is incapable of mixing high viscosity fluid, UZU can be easily used for mixing high viscosity fluid and for reactions that may generate deposite.

Installation of a general purpose shaft

A Φ8 genaral purpose shaft can be attached. Use optional parts, common spacers and caps.

Feel free to inquire if a special form or material for the rod or stirrer is required.

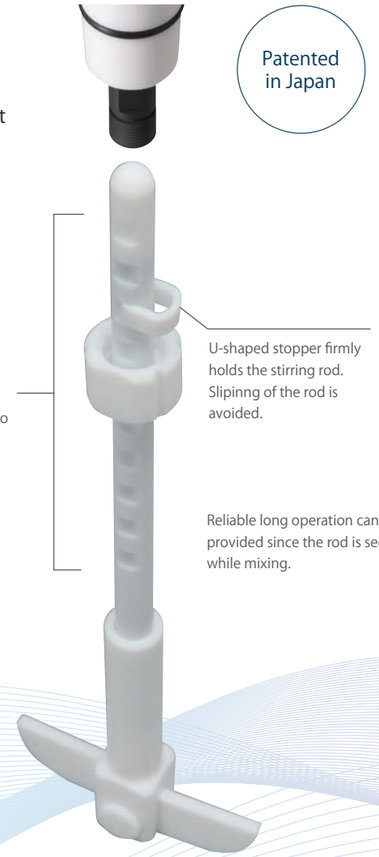
Chemical / heat resistant PTFE materials are used for the unit parts.

The originally developed shaft fixation mechanism holds the stirring rod firmly. Slipping of the rod or drop off of the rod during mixing is avoided.

New product

High loadable stirring rod

The position can be adjusted at 5 mm* to 10 mm intervals. The same height setting is easy to recreate.
※Only HS-0-01



Patented in Japan

U-shaped stopper firmly holds the stirring rod. Slipinng of the rod is avoided.

Reliable long operation can be provided since the rod is secure while mixing.

3. Usability improves laboratory work efficiency

Just fit the unit to the standard taper of the flask. A seal is not required for assembly. Therefore, installation can be done in a short time.

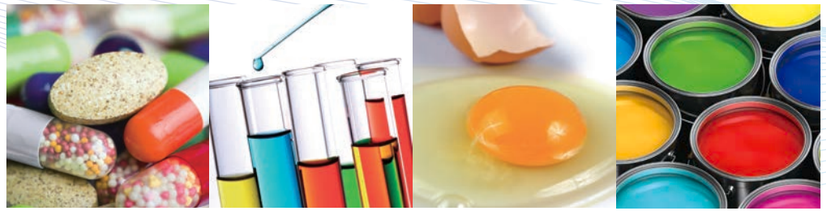
Shaft alignment is not required either, and the heavy unit does not require moving.

Easy handling is enabled for all.

A tapered joint with a different diameter is available (optional) in addition to the standard taper size (29/42).

Each Part can be easily assembled / disassembled without requiring tools.
Contamination from residual chemicals can be avoided by washing the parts regularly.

4. Used in a variety of applications



PTFE or ceramics are used for the wetted parts. Chemical / heat resistant materials cover a wide range of applications.

Since the stirrer and the seal are compact, space saving installation in the draft chamber is achieved.

Operation from the outside of the draft chamber is possible since the controller is separeted.

The number of revolutions can be set per 1 RPM, helping reproduce experiment procedures. A revolutions as low as 2 RPM can be set. Mixing by controlling the damage to the biological tissue or product is possible. An off timer that can be set per 1 minute is provided.

Custom parts orders are available.
Feel free to inquire if you need an additional fine machining or special processing.