Access Map

Access

- Approx10-minute walk from the south exit of Hiratsuka Station, JR Tokaido Line
- Approx25-minute drive from Atsugi I.C. of Tomei Expressway
- Approx5-minute drive from Chigasaki Kaigan I.C. of Shin-Shonan Bypass via Chigasaki JCT of Ken-O Expressway

JU-OH INC.

6-14 Matsukaze-cho, Hiratsuka-shi, Kanagawa 254-0812, Japan

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■ Plant phone +81-463-24-3223 fax+81-463-24-5566

URL http://www.ju-oh.com

Company Profile & Products

614 Hot RUNNER SYSTEM

Technology saves time and resources

JU-OH INC.

Spirit of challenge!

JU-OH INC.

Our products are not “things.”

What we offer are business achievements/know-how we have gained with our spirit of challenge and services which are available 24 hours a day, 365 days a year!

We are ready to support you whenever you need, and we always do our very best.

～ We will create new legends in our industry ～

JU-OH INC.

Company Profile & Products

■ Company name	JU-OH INC.
■ President & CEO	Akiko Shibata
■ Location	6-14 Matsukaze-cho, Hiratsuka-shi, Kanagawa 254-0812, Japan ・Office phone +81-463-21-6700 fax+81-463-23-6686 ・Plant phone +81-463-24-3223 fax+81-463-24-5566 URL http://www.ju-oh.com
■ Affiliated company	Shenzhen Shonan-Star Precision Machinery Co., Ltd. (Location: Shenzhen Nanshan District)
■ Established May	May 1, 1958
■ Capital	10 million yen
■ Business	● “614 Hot Runner System” with Electromagnetic Induction Heating Method ● “614 Hot Runner System”for metal molding (Magnesium, Aluminum, etc.) ● Production and sales of systems related to our plastic business

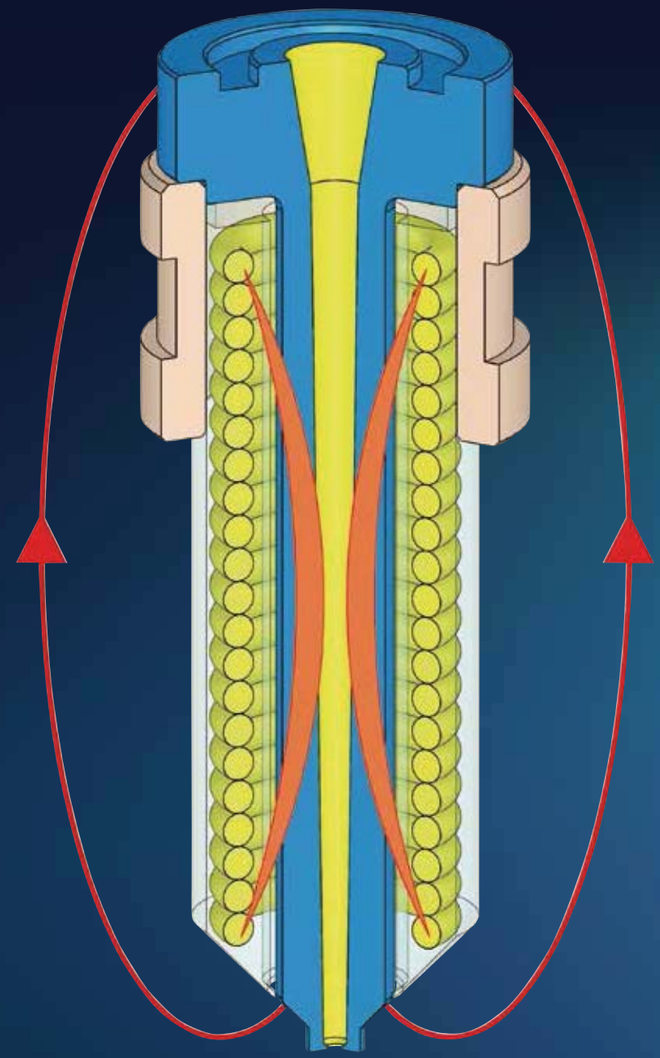
614 Hot runner system

Quick-Response External Heating Method

By using electromagnetic induction heating as a heat source, the 614 Hot Runner System becomes applicable to all types of resin.

It is applicable to a wide range of materials including general purpose resin super engineering plastics, ceramics, magnesium and aluminum.
Additionally, it meets a variety of demands such as to reduce the material costs, to shorten preparation and production cycle time and to improve its quality (warpage, voids, etc)

Principles of Electromagnetic Induction Heating



Coil wires carrying high-frequency currents generate electromagnetic radiations. Eddy currents, set up inside the nozzle coiled up by the wires, become a driving force of electric resistance and generate heat.
The electromagnetic induction heating method enables the nozzle directly to be heated without heating the coil wires. Hence it is possible to generate power rapidly available for the hot runner system. A small nozzle can be heated from normal temperature up to 250℃ in approx. 5 seconds.
It is also possible to synchronize with the molding cycle to prevent stringing and drooling.

614 Hot runner system

Features and Structure

The 614 Hot Runner System is designed perfectly to synchronize its molding process although it adopts the complete external heating method.

Nozzle Heat-Up Speed

The small nozzle can be heated from normal temperature up to 250 ℃ in approx. 5 seconds.

Electric Power Saving

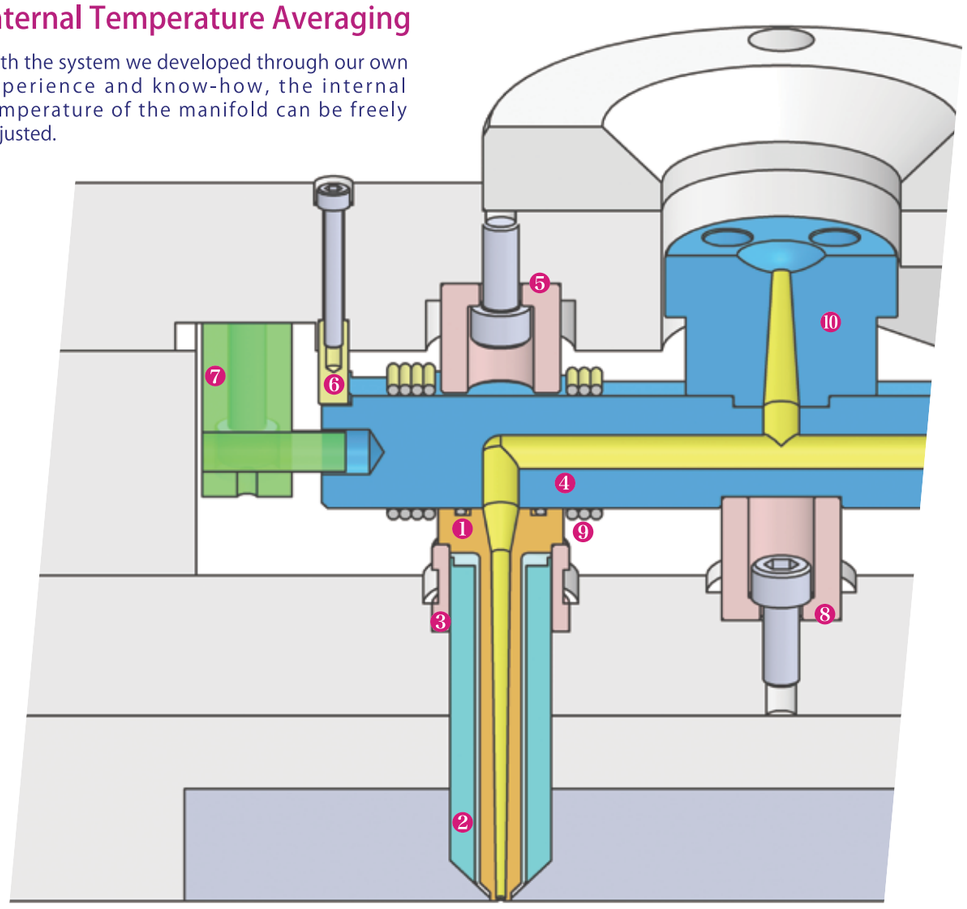
Because of the small masses of the nozzle and manifold, required heat usage can be reduced.
The electricity usage is only 20-50% less than that of electric resistance heating systems.

Internal Temperature Averaging

With the system we developed through our own experience and know-how, the internal temperature of the manifold can be freely adjusted.

Little Electrical Problems

The 614 Hot Runner System does not adopt the self-heating method such as electric resistance heating.
Because the coil itself is just to generate Eddy currents, the 614 Hot Runner System makes it possible to reduce troubles such as wiring disconnection even in use at high temperature ranges.



Little Heat Impacts for the Mold Caused by an Air Gap.

There is an air gap placed in the nozzle. Functioning as a heat insulating layer, the air gap suppresses the heat effect on the mold.

Little Pressure Loss and Heat Retention

The 614 Hot Runner System reduces pressure losses inside the system, adopting the external heating method, precise temperature control techniques and a simple structure.

Quick Color and Resin Changing

By adopting the external heating method, there is no part where the resin is left over of a manifold.
This makes it easy to change color and resin.

Compact Size

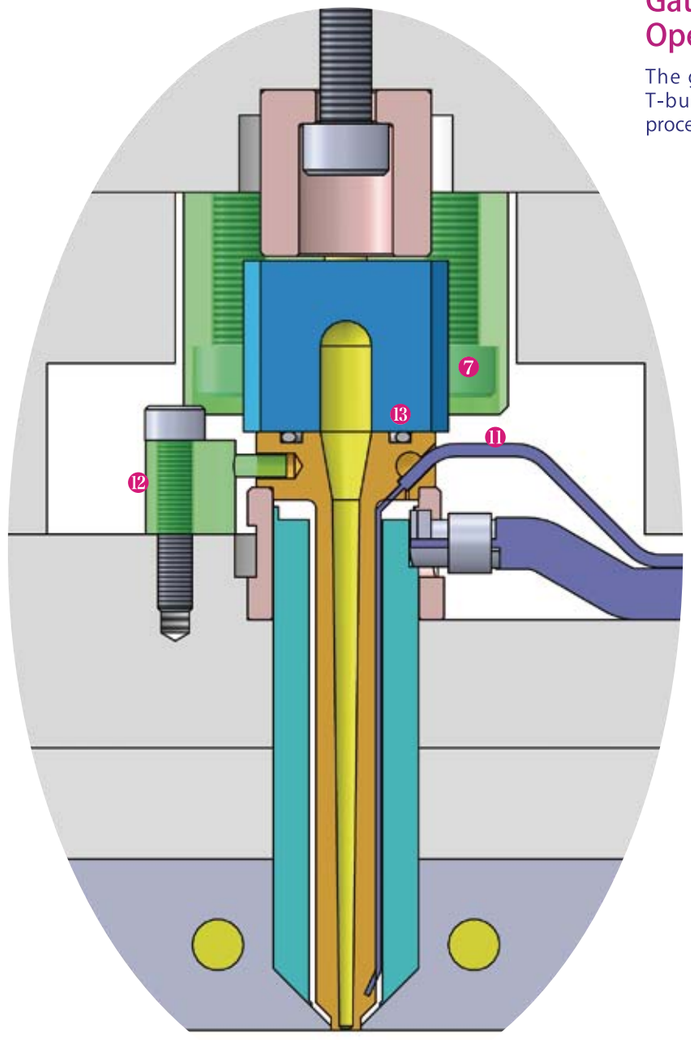
By using the compact-sized nozzle and manifold, the hot runner system can be utilized without enlarging the mold, which consequently makes it easy to be installed or arranged.

Reliable Gate Sealing

Since the tip of the nozzle directly contacts the cavity, a thin seal is put immediately before the gate to make the sealing process more reliable.

Gate Opening with ΔT-Button Operation

The gate opens quickly in seconds. The ΔT-button is used when the system is in the process of starting up, purging, etc.



1. Nozzle
2. Nozzle Coil Unit
3. Nozzle Insulation Ring
4. Manifold
5. Manifold Insulation Ring
6. Manifold Positioning Pin
7. Manifold Fixing Apparatus
8. Center Insulation Ring
9. Manifold Heating Coil
10. Sprue Bush
11. Nozzle Thermocouple
12. Nozzle Fixing Apparatus
13. Stainless O Ring

614 Hot runner system

The 614 Hot Runner System is compatible with various design patterns of nozzle and manifold to meet the customer's demands.
We offer it as a total system which meets any requirements such as selection of steel materials, need of polishing, type of coating, gate diameter, internal flow path diameter and so on according to used materials and product shapes.

※1: Customers may be requested to have spares for products out of our standards.
※2: Since the system is a build-to-order product, there is no stock.

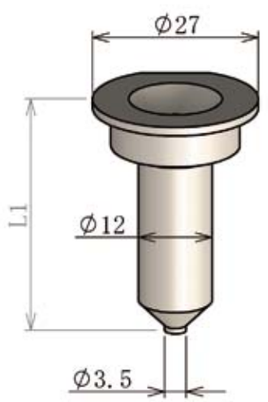
Nozzle Spec

L1
40
50
60

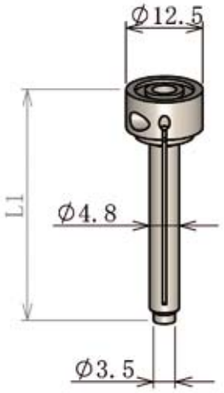
L2
40
50
60
70
80
90
100

L3
80
90
100
110
120

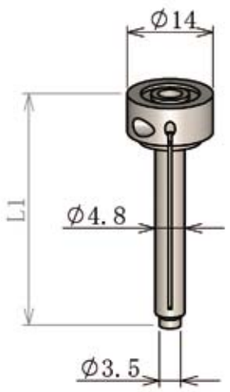
Compact sprue-less nozzle



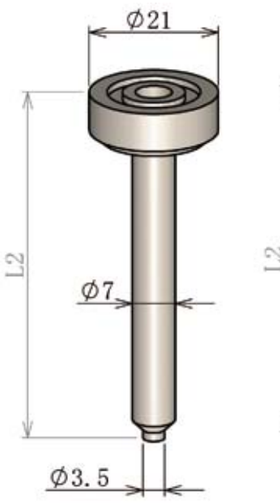
Compact nozzle



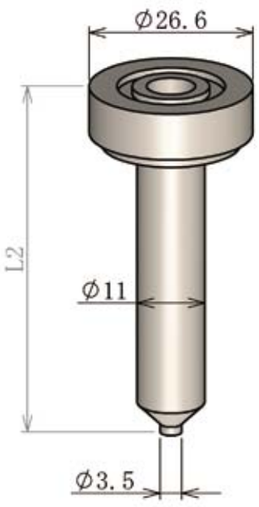
ϕ 4.8 small nozzle



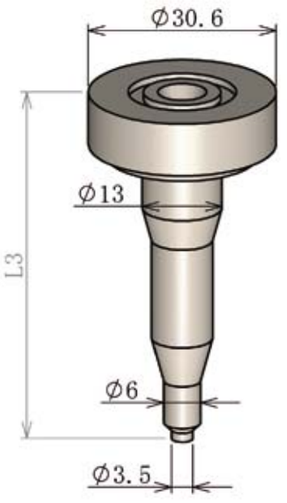
ϕ 7 type nozzle



ϕ 11 type nozzle



ϕ 13 type nozzle



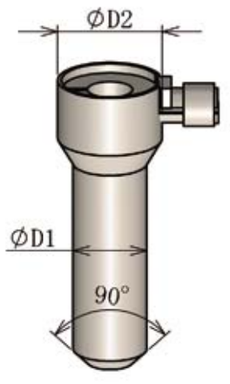
Coil Unit

Nozzle diameter	D
ϕ 4.8	ϕ10.12
ϕ 7	ϕ17
ϕ11	ϕ22.5
ϕ13	ϕ24.6

Nozzle diameter	D1	D2
ϕ 7	ϕ12	ϕ17
ϕ11	ϕ17	ϕ22.5

A/B type coil unit

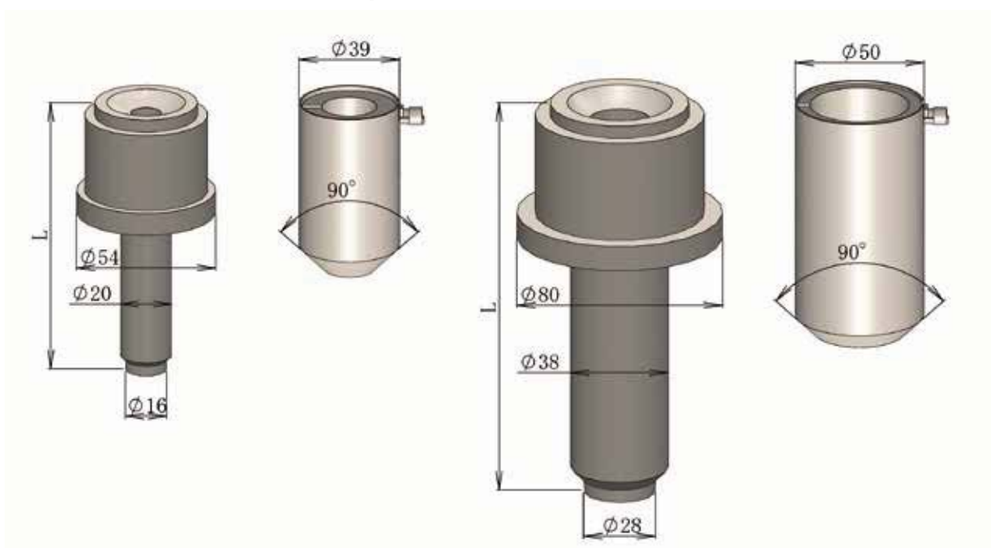
Stepped type coil unit



Coil unit for small nozzles

▪ For metal molding ▪

Examples of nozzle/coil units



▪ Materials ▪

PEEK, PES, LCP, PE, PPE, PBT, PPA, PPS, Plastic bonded magnet compounds (Neodymium, Ferrite, Samarium cobalt), Fluororesin (ETFE, PFA), MIM, CIM, Optical plastics, Biodegradable plastic, Magnesium, Aluminum, Glass fiber, Carbon fiber, Inorganics, Glass beads, Mineral formulation, etc. ,

▪ Product Line ▪

Automobile parts, Low-current parts, Optical parts, Medical parts, Media parts, Smartphone parts, etc.

Further Advanced Heating Control Devices

G-series SK-GIX

With new functions, satisfying control and management become possible on G-series SK-GIX.
A 7-inch-wide touch display is adopted as an LCD screen.
3 languages are equipped in standard (Japanese/English/Chinese).
The CE mark is acquired.

※ This is a synthetic image.

Compact Controller

■Basic Configuration
Heating control device (specification: NF011SPL)
Built-in power unit L (1ch)
Built-in power unit H (1ch)
Remote unit : 1 unit
■Power Supply Specifications
Three phase 4 wire system
AC200V ±10% 20A(MAX) 50/60Hz

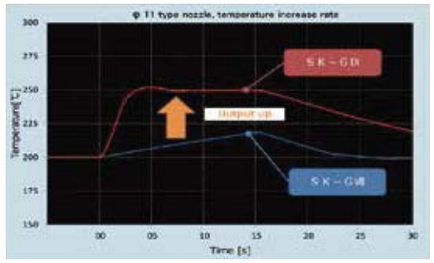
■Environmental Conditions
Temperature : 5 ～ 40℃
Humidity : 20 ～ 90%RH (no condensation)
■Dimensions
275(W) x 450(D) x 180(H) mm
■Weight
Approx 14kg
Weight varies depending on the components of the equipment.
■Remote Unit Specifications
Display unit
LCD : 7 inch wide touch display
Number of dots : 800 x 480

SK-GIX controller

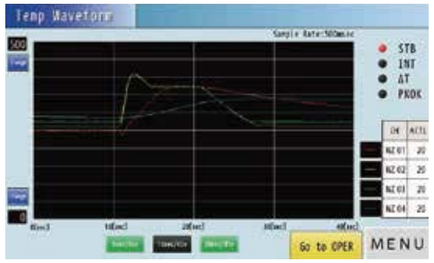
■Basic Configuration
Heating control device (specification: NF042)
Rack : 1 unit
Main unit : 1 unit
Built-in power unit L (2ch) : 2 units
Built-in power unit H (2ch) : 1 unit
Remote unit : 1 unit
■Power Supply Specifications
Three phase 4 wire system
AC200V ±10% 30A(MAX) 50/60Hz
Unstable power supply voltage affects heat output so that please use the stabilizer to maintain constant voltage.
■Environmental Conditions
Temperature : 5 ～ 40℃
Humidity : 20 ～ 90%RH (no condensation)
■Dimensions (Excluding Protrusions)
Rack
340(W) x 450(D) x 575(H) mm
Power unit L
288(W) x 360(D) x 80(H) mm
Power unit H
288(W) x 360(D) x 80(H) mm
Main unit
288(W) x 290(D) x 200(H) mm
Remote unit
225(W) x 50(D) x 175(H) mm
■Weight
Rack : 22.5kg
Power unit L : 6.7kg
Power unit H : 6.7kg
Main unit : 12.5kg
Remote unit : 1.1kg
■Remote Unit Specifications
Display unit
LCD : 7 inch wide touch display
Number of dots : 800 x 480

SK-GIX
New Functions

Increase in Nozzle Output
(ϕ11 type nozzle, temperature increase rate)



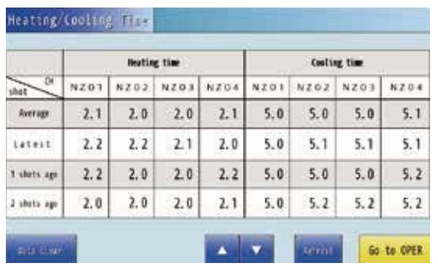
During continuous molding operation, the waveform is displayed on the remote screen.



Output Error Notification Function

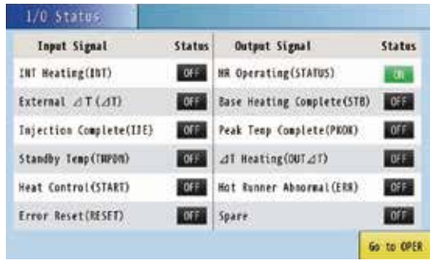
If any changes in heating or cooling time are detected during continuous molding operation, an onscreen warning is displayed.

Automatic Measurement Table for Heating/Cooling Time

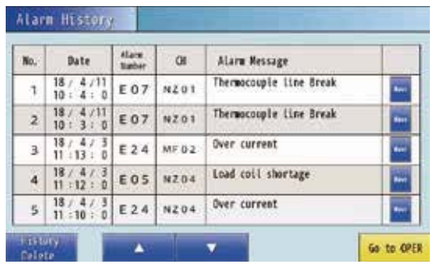


Save Data Function (15 Data Items)

I/O Status Confirmation Function

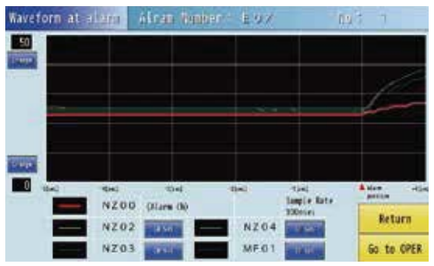


Save Alarm history



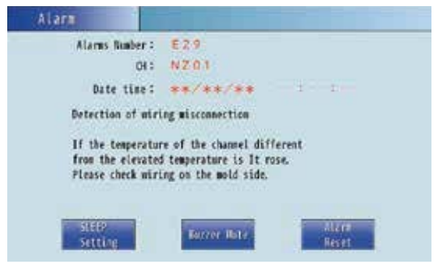
The error date and time are saved.

Troubleshooting Function



The waveform data 5 seconds before and 1 second after error occurrence are saved.

Faulty Wiring Detection Function



If any faulty wiring connections are detected, an alarm is sounded.

PID Auto Tuning Function

The controller measures the load of the nozzle and manifold, and automatically sets optimum outputs and PID values.
With this function, it is always possible to perform metal molding under optimum conditions.