

Launched NIF-20V, a compact injection molding machine for fluororesins

### 1. Our approach to market trend

Injection molding machines are often used for manufacturing parts using thermoplastic resins as one of plastic molding processing methods. In recent years, there has been an increasing demand for fluororesins with "non-stick", "wear resistance", "heat resistance", "chemical resistance" and "corrosion resistance" particularly in semiconductor manufacturing equipment, transportation equipment and electrical components.

On the other hand, in the fluororesin molding process, contamination is likely to occur due to wear, deformation, and corrosion of injection molding equipment parts, and many users are forced to make inefficient production with large equipment with horizontal specifications because there is no dedicated equipment suitable for small molded products.

In February 2024, utilizing the strengths of the technologies such as the materials, hydraulic pressure, and machine tools, that we have cultivated as a comprehensive machine maker, we developed and launched NIF-20V suitable for insert molding of small sized products, that is a vertical-type injection molding machine that reduces contamination and thermal deterioration and resin materials in fluororesin molding process.

### 2. Targeted market

Semiconductor field: Components for semiconductor manufacturing equipment (valves for chemical liquids, fittings, sensor covers, pumps, etc.)

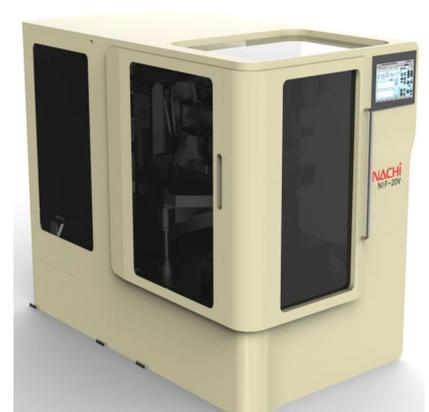
Transportation equipment: Automobile and electrical parts (sealing materials, sensor covers, etc.)

### 3. Features of "NIF-20V"

- (1) High Quality: Realizes high-quality fluororesin molding by reducing contamination caused by wear and corrosion of injection molding machine components, shortening resin retention time per cycle and suppressing thermal deterioration of resin materials.
- (2) Durability: Durability is dramatically improved by using corrosion-resistant, high-hardness alloyed NPR-FX25 developed in-house as material for fluororesin injection units.
- (3) High Precision: Precision hydraulic servo system helps powerful and highly accurate control of injection and mold clamping operations.
- (4) Productivity: Vertical-type specifications suitable for insert molding, and a variety of molded products and small lots available (Therefore it is possible to down size the equipment and dies)
- (5) Maintainability: Torpedo plunger system adopted for easy injection unit replacement

### 4. Specifications

|                             |   |
|-----------------------------|---|
| (1) Installation dimensions | W1.4m×D1.9m×H 1.7 m                                 |
| (2) Clamping force          | 20tonf (196kN)                                      |
| (3) Mold dimension          | W200×L200×H150~250mm                                |
| (4) Injection Pressure      | Max 100MPa  |
| (5) Plasticizing rate       | 2.5kg/h<br>(Variable depending on plastic material) |
| (6) Compatible Resin        | PFA injection molding-grade MFR15~40                |



5.Launch Date and sales target

(1) Launch Date: February 2024

(2) Price: Open Price

(3) Sales target: 20 units/year

6.Inquiries for new products

Please fill in an inquiry form on our website and contact Thermotech division.

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