

"X-Pump<sup>®</sup>" equipped  
Eco-Friendly Molding Machine (Hybrid Type)

**NISSEI**<sup>®</sup>

# NPX7 Advance

**NISSEI original "X-PUMP<sup>®</sup>" equipped  
hybrid type machine that achieves  
high-precision stable molding and  
high energy efficiency**



**NPX7 Advance**  
(Equipped with options)



**A groundbreaking 12mm inline screw  
that broadens moldable range**

NPX7 Advance with NISSEI original innovative hybrid "X-Pump<sup>®</sup>" system possesses the advantages of both electric and hydraulic injection molding machines. It offers well-balanced performance with its high-rigidity direct-pressure clamping system, excellent injection performance, and supreme energy efficiency. It redefines the concept of hydraulic injection molding systems.



## The Ultimate Level of Energy-Saving

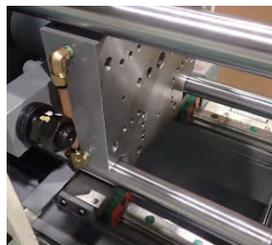
- ▶ About 40% saving in power consumption (in comparison with conventional hydraulic machines)

## Outstanding Injection Performance

- ▶ High injection response time: 25ms
- ▶ A wide range of injection from ultra-low to high-speed (150mm/s)
- ▶ "High-pressure + long-sustained" injection holding pressure performance

## High-Rigidity Direct-Pressure Clamping

- ▶ Linear guide for movable platen slide base section
- ▶ Stable mold open/close movement and uniform mold pressure distribution
- ▶ Wide tie bar (170 x 155mm mold can be mounted)



\* Recommended pellet size: below 2.0mm

## Excellent Controllability

- ▶ Better operability and molding data management feature of the all-new TACT<sup>®</sup> IV Controller



Management of

- Monitor data
- Mold trend data
- Molding conditions
- Maintenance schedule

and more...

**Evolved to a vertically long screen**



Vertical dual window display



Touch and slide display▶

OPTION

**Quality/production control system  
PQ Manager**



Viewing from a tablet PC possible



▲Operation status graph

▲Monitor graph

## Performance Specifications

## NPX7 Advance

Injection		
Screw diameter	inch (mm)	0.47 (12)
Injection capacity	inch <sup>3</sup> (cm <sup>3</sup> )	0.27 (4.5)
Plasticizing capacity (PS)	lbs/h (kg/h)	3.0 (1.4)
Injection pressure	psi (MPa)	23070 (159)
Injection rate	inch <sup>3</sup> /s (cm <sup>3</sup> /s)	1.04 (17)
Injection velocity	inch/s (mm/s)	5.9 (150)
Screw rotation speed	rpm	0~205
Hopper capacity (optional)	Gal (L)	1.13(4.3)

Clamping		
<b>Clamping force</b>	US ton (kN)	7.76 (69)
Clamping stroke	inch (mm)	6.70 (170)
Min. mold thickness	inch (mm)	4.33 (110)
Max. daylight opening	inch (mm)	11.02 (280)
Tie bar clearance (H×V)	inch (mm)	6.70 × 6.12 (170 × 155)
Die plate dimensions (H×V)	inch (mm)	9.05 × 8.86 (230 × 225)
Ejector stroke	inch (mm)	1.57 (40)

Others		
Pump motor	kW	4.5
Heater band capacity	kW	1.67
Hydraulic oil quantity	Gal (L)	13.2 (50)
Machine dimensions	L inch (m)	90.6 (2.30)
	W inch (m)	28.2 (0.72)
	H inch (m)	58.1 (1.48)
Floor dimensions	L inch (m)	81.1 (2.06)
	W inch (m)	23.2 (0.59)
Machine weight	lbs (t)	1710 (0.76)

- 1MPa=10.2kgf/cm<sup>2</sup>≈10kgf/cm<sup>2</sup>, 1kN=0.102tf≈0.1tf
- Actual plasticizing capacity may vary, depending on the molding conditions and materials used.
- The specifications are subject to change without notice due to performance upgrades.

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**NISSEI AMERICA, INC.**

## Standard equipment

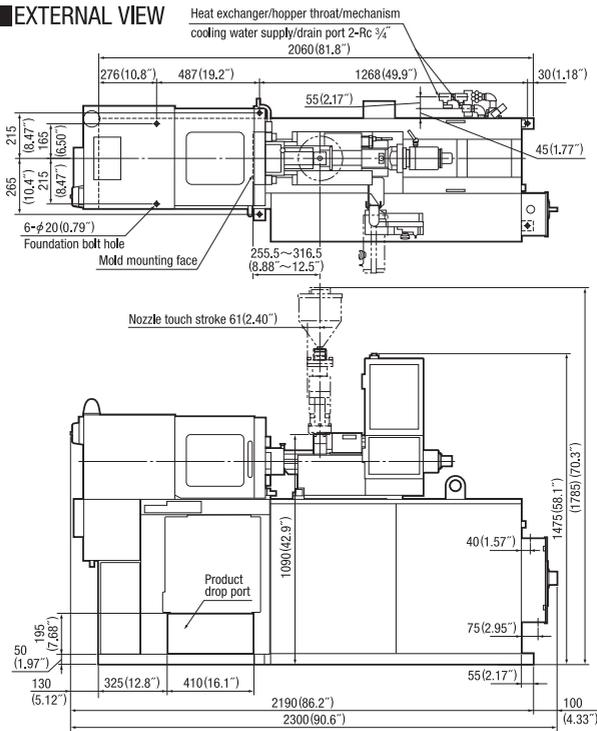
Control: **TACT® IV** (15-inch color screen)  
 Low-pressure mold clamping (mold protection)  
 Ejector start timer  
 Ejector plate return confirmation (terminal output)  
 Clamping slide base: high-precision linear guide  
 Platen cooling circuit (stationary and movable platen)  
 Digital setting of injection/mold positions  
 Injection process control: 3-speed, 3-pressure (encoder specification)  
 Over packing prevention circuit  
 Automatic purging circuit  
 Screw cold start prevention (all zones)  
 Nozzle backward start timer/metering start timer  
 Nozzle/barrel temperature control (screen setting, PID/SSR control)  
 Back pressure control (manual setting)  
 Hopper throat temperature control: electromagnetic valve  
 Nozzle/barrel heat retention circuit (forced and emergency heating)  
 Injection response increase

Monitor display/product pass/fail judgment monitor  
 Shot counter/production management counter/lot management counter  
 Product take-out robot interface  
 Molding conditions internal memory  
 Statistical processing function  
 Error history display  
 Multi-language changeover function: English↔Japanese  
 USB port/data saving in an external memory (USB flash drive)  
 Calendar timer (barrel heat-up)  
 Password protected molding conditions  
 Air blow (standard spec. for circuit only)  
 Alarm lamp/buzzer/emergency stop button (operator side)  
 Mold clamping safety device (mechanical and electric types)  
 Error display function/emergency power shutdown  
 Nozzle/barrel temperature upper/lower limit alarm  
 Built-in electrical outlet

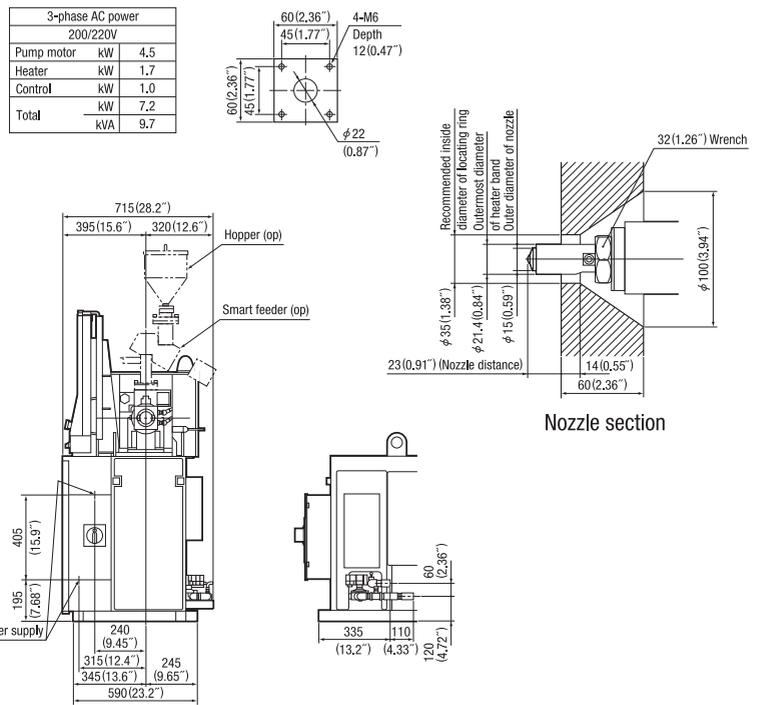
## Optional equipment

Connector nozzle  
 Wear resistant barrel and screw  
 High-temperature resistant barrel  
 Insulation plate  
 Mold temperature control  
 Hydraulic oil heat-up  
 Fixed chute  
 Swing chute  
 Heater disconnection alarm  
 Smart feeder  
 Hopper  
 Mounting pad  
 Castors

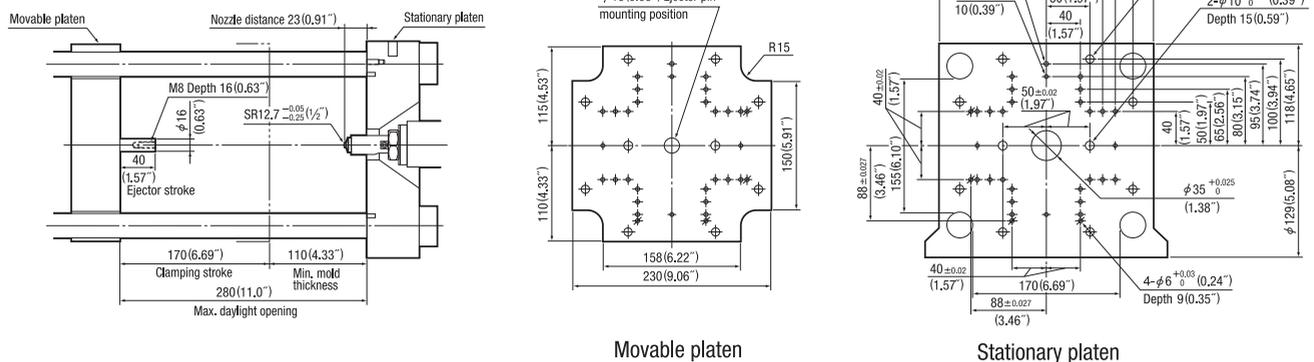
### EXTERNAL VIEW



### HOPPER FIXATION DIAGRAM



### MOLD ATTACHMENT DIAGRAM



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