

"X-Pump[®]" equipped
Eco-Friendly Molding Machine (Hybrid Type)

NISSEI[®]

NPX7 Advance

**NISSEI original "X-PUMP[®]" 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[®]" 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

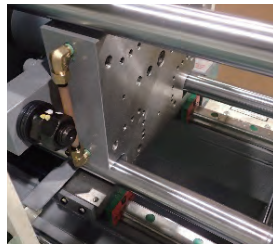
- ▶ About 40% saving in power consumption (in comparison with conventional hydraulic machines)

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[®] IV Controller



Management of

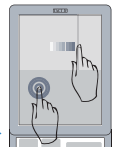
- Monitor data
- Mold trend data
- Molding conditions
- Maintenance schedule

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 ³ (cm ³)	0.27 (4.5)
Plasticizing capacity (PS)	lbs/h (kg/h)	3.0 (1.4)
Injection pressure	psi (MPa)	23070 (159)
Injection rate	inch ³ /s (cm ³ /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		
Clamping force	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/cm²≈10kgf/cm², 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

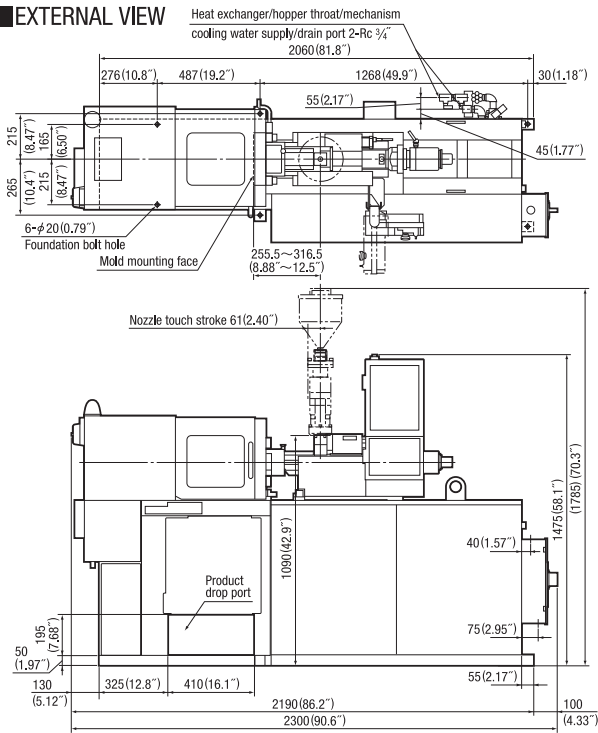
Control: **TACT® IV** (15-inch color screen)
 Low-pressure mold clamping (mold protection)
 Ejector start timer
 Ejector plate return confirmation (terminal output)
 Clamping slide base: high-precision linear guide
 Platen cooling circuit (stationary and movable platen)
 Digital setting of injection/mold 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

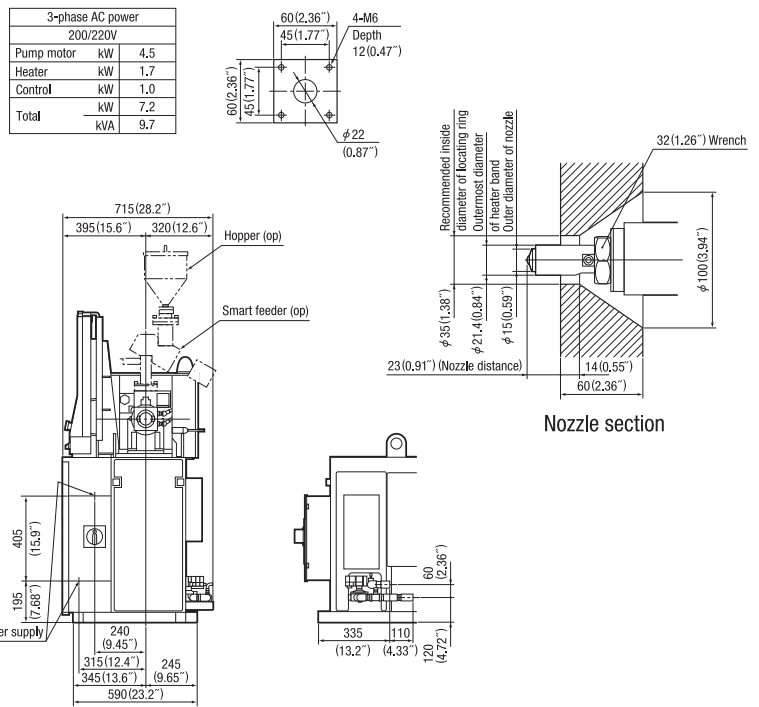
Optional equipment

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

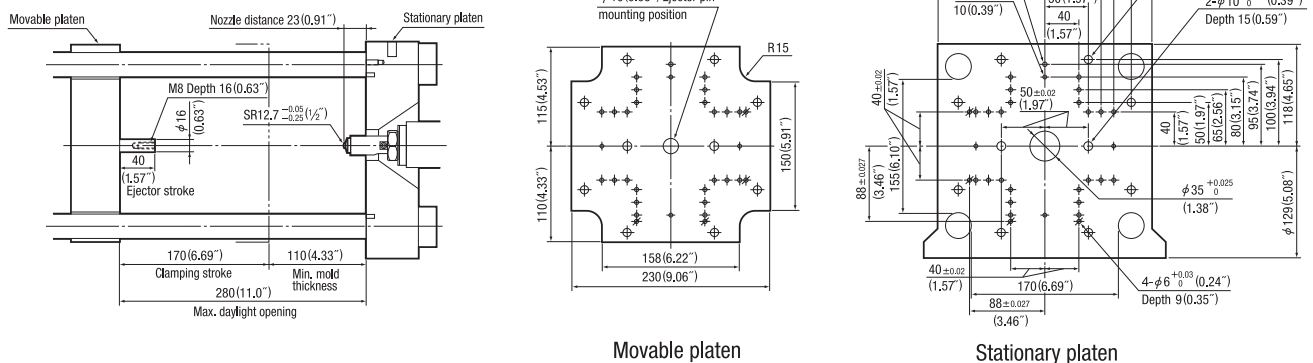
EXTERNAL VIEW



HOPPER FIXATION DIAGRAM



MOLD ATTACHMENT DIAGRAM



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