Extreme Energy-Saving Extrusion Press

** NPC-SS series 3G **

New Pre-Compression Stem Slide Extrusion Press

**Premium**

**Stem Slide Structure**

- Stem position is detected by the sensor at all the time.
- Not use the hydraulic system. So there is no risk for oil leakage.

**Small capacity pumps & Servo motors**

**DMI-PRO**

Data Management & human-machine Interface for Professional

**Pendant Type Operation panel**

Standard

**Linear Guides for Container and Cross-Head**

30% Smaller Foot Print Due to Type Billet Loader

** NPC-SS/3G Premium Lineup **

<table>
<thead>
<tr>
<th>Extrusion Force (Nominal)</th>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,650 UST</td>
<td>15 MN</td>
</tr>
<tr>
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</table>

3G Premium 15  
3G Premium 18  
3G Premium 25  
3G Premium 30  
3G Premium 36
Energy Saving

30-50% Energy Savings
- Small pumps and servo motors are applied.
- Small pumps delivery is controlled by servo motor.

<table>
<thead>
<tr>
<th>Series</th>
<th>NPC-SS/3G</th>
<th>NPC-SS/3G Soft Starter</th>
<th>NPC-SS/3G Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motors</td>
<td>80 kW × 3 sets</td>
<td>80 kW × 3 sets (Gen)</td>
<td>80 kW × 3 sets (Gen)</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>376</td>
<td>258</td>
<td>216</td>
</tr>
<tr>
<td>Reduction rate (%)</td>
<td>-</td>
<td>6.6</td>
<td>21.7</td>
</tr>
<tr>
<td>Number of the required motors</td>
<td>3</td>
<td>2</td>
<td>6</td>
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</table>

Installation Space is Minimized by 30%

Smaller foot print billet loader is applied
- Foot print of the billet loader from press center line is reduced by 30%.
- Simultaneous movement with two ball screws parallel located.

Improvement of the Quality

Linear guides are applied for container and cross-head
- Ensuring the alignment both the container and cross-head. Fewer Lubricant and wear-free
- Energy saving for those movement.

Accuracy improvement of the Ram speed by small pumps and servo motors

Correspondence and Environment

Correspondence to IOT
- Collect data and propose optimal service.

<UBE service person uploads data using USB or LAN and utilizes it for maintenance.
- You can remotely operate the VS touch panel by wireless LAN connecting the tablet or PC.

Lower Noise level 10-15 dB(A) (compare with NPC-SS/3G)
- Combination of small pumps and servo motors brings a reduction of the noise level.

New Control System “DMI-PRO”

Data management of each Die
- Error massage and alarm history
- Maintenance guide

Operation & Set Up

Easy Operation
- Automatic start and stop for the pumps/motors.
- Machine data monitors mainly for extrusion.

Trouble Shooting / Maintenance

Maintenance Support
- Operating status of various sensors.
- Operating status of the solenoid valve.

Advanced Function

Drawings
- Ability to display drawings and leave notes.

Security Level

it is possible to change the function which can be used
- Security level setting screen.
The Highest Energy-Saving Extrusion Press

Energy Saving

- Oil volume: Reduced by 25-45% (Reduced by 45% compared to the existing UBE’s press before 2004.)
  - Minimum oil volume of 4,500 liter on the 2,750 UST Extrusion Press.

- 35-55% Energy Savings
  - Small pumps and servo motors are applied.
  - Small pumps delivery is controlled by servo motor.

Quality Enhancement

- Linear guides are applied for container and cross-head
  - Ensuring the alignment both the container and main cross-head. (Fewer Lubricant and wear-free)
  - Energy saving for those movement.

Improvement of the Productivity

Dead Cycle Time: Reduced by 10-50%
(Reduced by 50% compared to the existing UBE’s press before 1993.)

- Hybrid Drive of container and shear to realize the faster speed and smooth movement.
- Linear guides for container, main cross-head and billet loader.

Hybrid Container

- Container advance and return are driven by the servo motor.
- Container seal and strip are moved by the hydraulic cylinder.

Hybrid Die-slice

- Die-slice shear by hydraulic cylinder and its movement by servo motor.
- Saving energy and room.
- Shorten die change time.

Hybrid Discard Shear

- Shear by hydraulic cylinder and its movement by servo motor.

Control System

- Pendant Type Operation panel.

DMI-PRO

Data Management & human-machine Interface for Professional

SS-Hybrid Lineup

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</tr>
<tr>
<td>5,000 UST</td>
<td>50 MN</td>
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- SS-Hybrid 15
- SS-Hybrid 18
- SS-Hybrid 25
- SS-Hybrid 30
- SS-Hybrid 36
Upgraded UBE Short Stroke Extrusion Press

**NPC-SS Series 3G**

- **Container Seal Pump Energy Saving**
  - The Variable displacement pump delivers only the amount of hydraulic oil to maintain container seal pressure.

- **Container Heating System**
  - Container with internal cartridge heater.
  - Accurate temperature control.
  - Independent precise SSR 4 zones control.
  - Can be set and operated on DMI-III.

- **Advance Energy for Extrusion (option)**
  - The first use in the world.
  - Automatic pump number selection by the extrusion speed.
  - Shock less restart of the pumps/motors for long life span.

**Compact Hydraulic Components**

- **Smaller Hydraulic Oil Tank**
  - Oil volume 24.5 MN (2,750 UST) • 6,000 liters.

- **Easier Maintenance**
  - Most hydraulic components are installed around the oil tank.

**NPC-SS/3G Lineup**

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<tr>
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<td>75 MN</td>
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<tr>
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<td>80 MN</td>
</tr>
<tr>
<td>10,000 UST</td>
<td>90 MN</td>
</tr>
<tr>
<td>11,000 UST</td>
<td>100 MN</td>
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**Control System**

- Stand alone Type Operation panel (option).

**Data Management & human-machine Interface**

**Existing System**

Max Efficiency 16%
**UBE Extrusion Presses All Over the World**

- **17.8 MN (2,000 UST)**
  Direct Press (NPC-SS/3G)

- **24.5 MN (2,750 UST)**
  Direct Press for Copper

- **90 MN (10,000 UST)**
  Direct PRESS (NPC-SS)

- **29.4 MN (3,300 UST)**
  Indirect Press for Copper

- **65 MN (7,300 UST)**
  Direct / Indirect Press

- **22.2 MN (2,500 UST)**
  Direct Press with Piercer

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[Map showing global distribution of UBE extrusion presses]