Wings of technology
Spirit of innovation
UBE

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UD FONT

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Extrusion Press

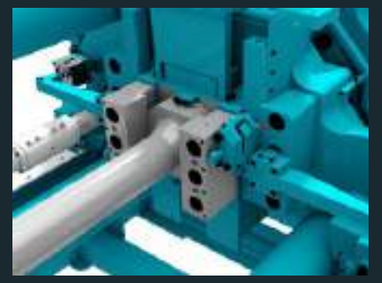
UBE

Extreme Energy-Saving Extrusion Press

NPC-SS series 3G

New Pre-Compression-*Short Stroke Stem Slide* Extrusion Press *Premium*

Stem Slide Structure



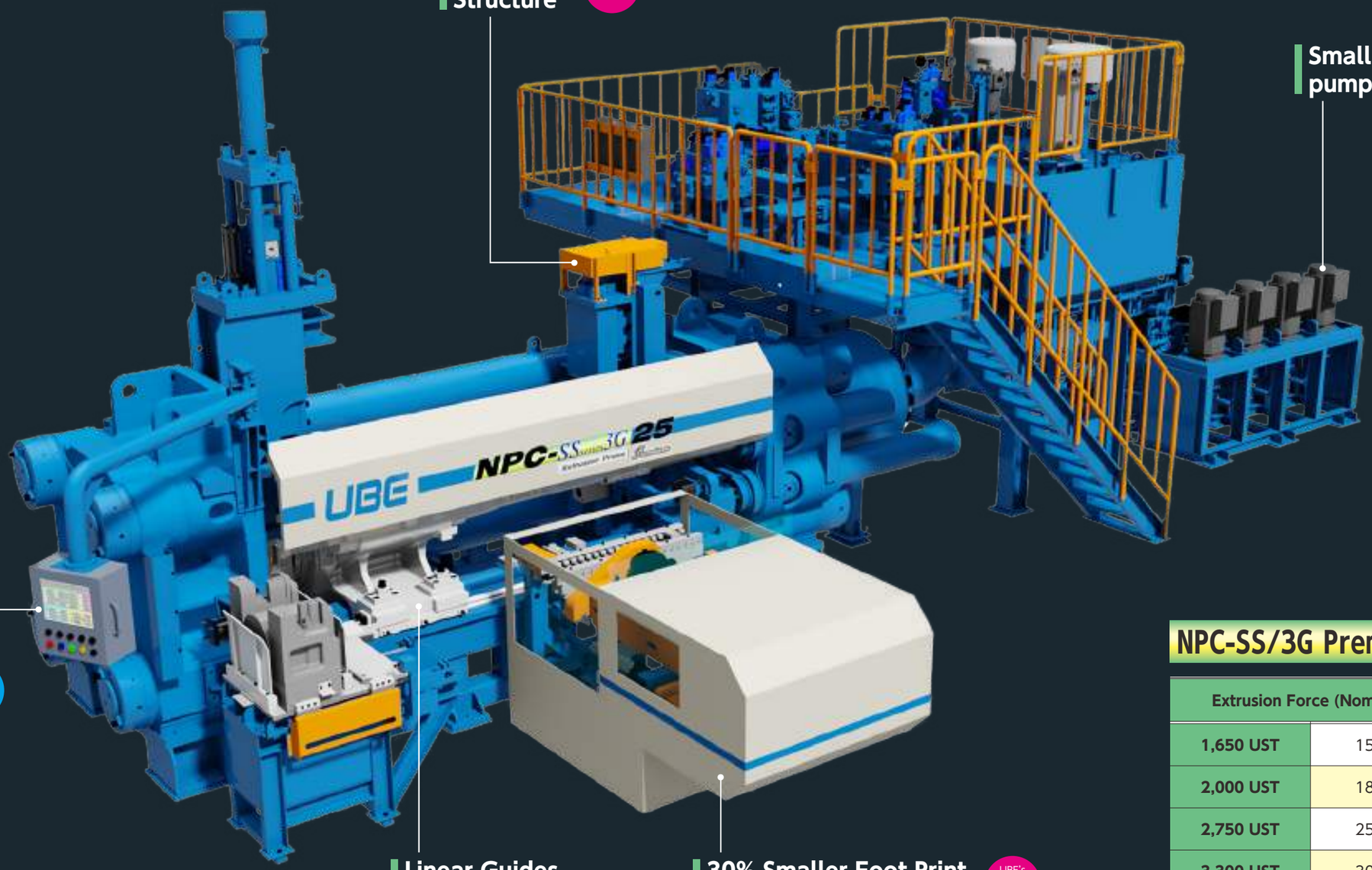
▶Stem position is **detected by the sensor** at all the time.

▶Not use the hydraulic system. So there is **no risk for oil leakage**.

DMI-PRO

Data Management & human-machine Interface for ***Professional***

Stem Slide Structure UBE's original technology



Small capacity pumps & Servo motors

Pendant Type Operation panel Standard

Linear Guides for Container and Cross-Head

30% Smaller Foot Print Due to Type Billet Loader UBE's original technology

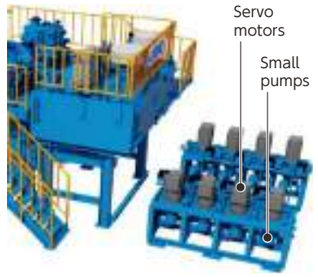
NPC-SS/3G Premium Lineup

Extrusion Force (Nominal)		Model Number
1,650 UST	15 MN	3G Premium 15
2,000 UST	18 MN	3G Premium 18
2,750 UST	25 MN	3G Premium 25
3,300 UST	30 MN	3G Premium 30
4,000 UST	36 MN	3G Premium 36

Energy Saving

30-50% Energy Savings

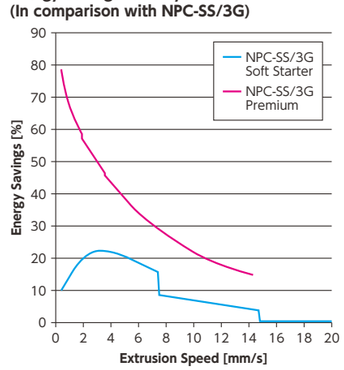
- Small pumps and servo motors are applied.
- Small pumps delivery is controlled by servo motor.



Extrusion speed 10 [mm/s]
pressure 25 [MPa]

Series	NPC-SS/3G	NPC-SS/3G Soft Starter	NPC-SS/3G Premium
Motors	220 kW × 3 sets	220 kW × 3 sets	55 kW × 8 sets (Servo)
Pumps	A4VSO500	A4VSO500	A15VSO145
Consumption Power [kW]	276	258	216
Reduction rate [%]	-	6.6	21.7
Number of the required motors (pumps)	3	2	6

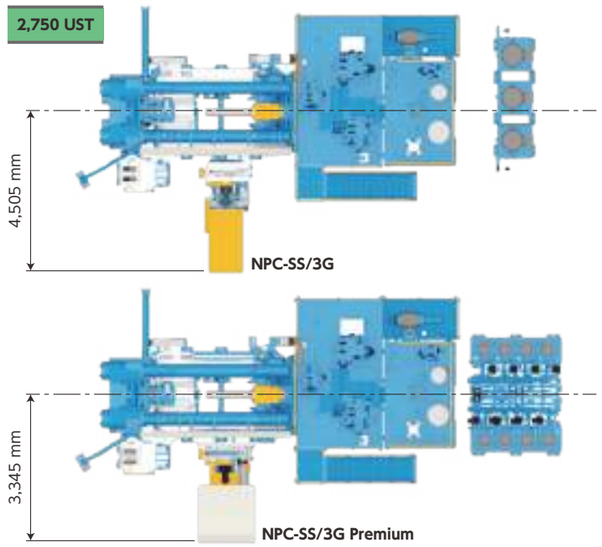
Energy Savings for only Extrusion
(In comparison with NPC-SS/3G)



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

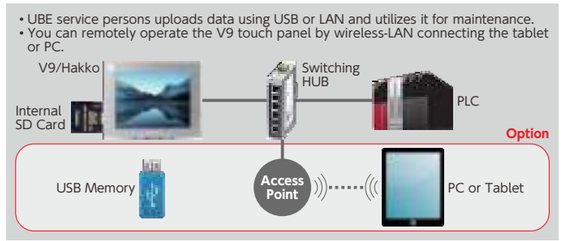
- Ensuring the alignment both the container and cross-head. (Fewer Lubricant and wear-free)
- Energy saving for those movement.

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

Maintenance and Environment

Correspondence to IOT

- Collect data and propose optimal service.



Lower Noise level 10-15 dB(A) (compare with NPC-SS/3G)

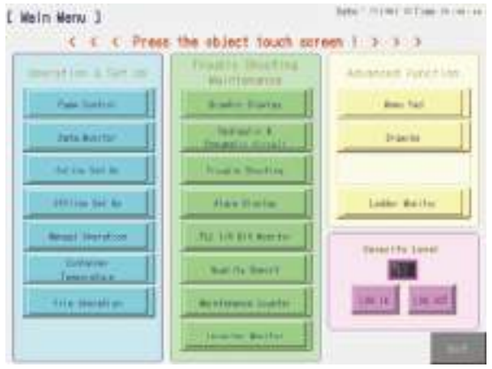
- Combination of small pumps and servo motors brings a reduction of the noise level.

New Control System “DMI-PRO”

DMI-PRO

Data Management & human-machine Interface for Professional

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



Operation & Set Up

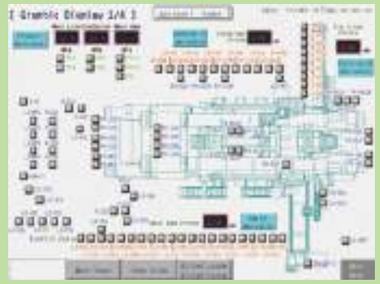
Easy Operation

- Automatic start and stop for the pumps/motors.

- Machine data monitors mainly for extrusion.

Trouble Shooting / Maintenance

Maintenance Support

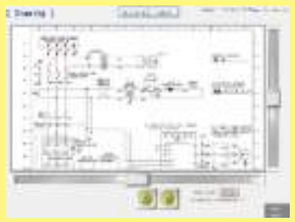


- Operating status of various sensors.

- 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

Short stroke Stem slide SS-Hybrid Extrusion Press

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

UBE's original technology

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

Hybrid Die-slide

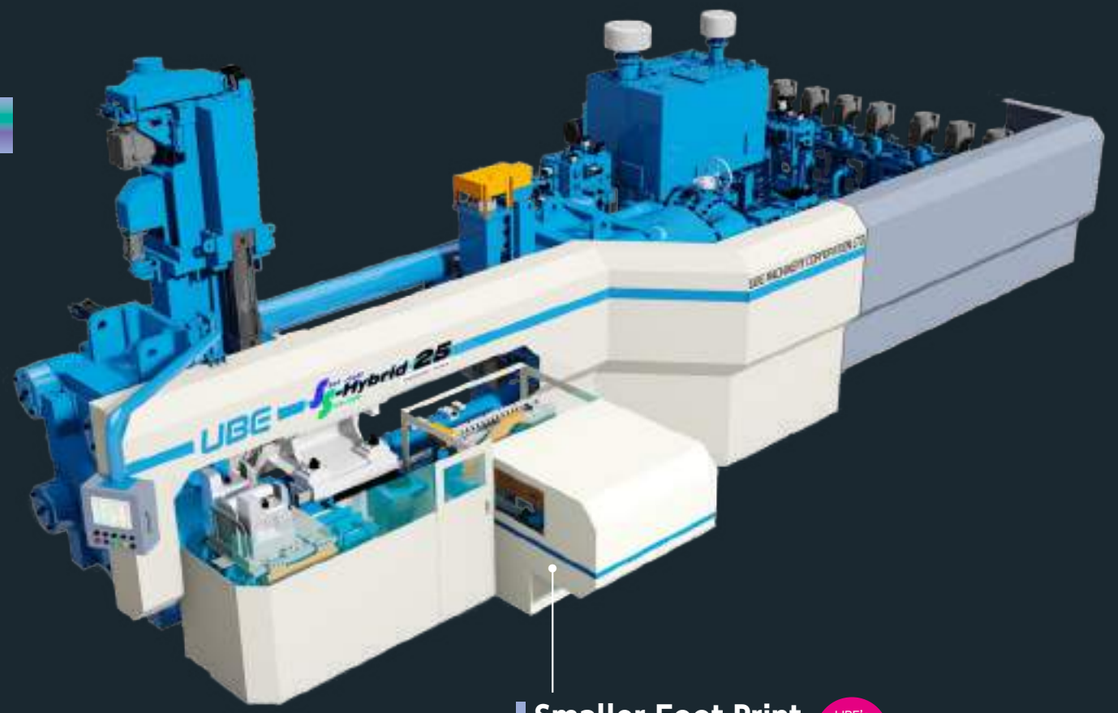
UBE's original technology

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

Hybrid Discard Shear

UBE's original technology

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



Smaller Foot Print Due to Type Billet Loader

UBE's original technology

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.

Control System

- Pendant Type Operation panel.

DMI-PRO

Data Management & human-machine Interface for ***Professional***

SS-Hybrid Lineup

Extrusion Force (Nominal)		Model Number
1,650 UST	15 MN	SS-hybrid 15
2,000 UST	18 MN	SS-hybrid 18
2,750 UST	25 MN	SS-hybrid 25
3,300 UST	30 MN	SS-hybrid 30
4,000 UST	36 MN	SS-hybrid 36

Upgraded UBE Short Stroke Extrusion Press

NPC-SS series 3G

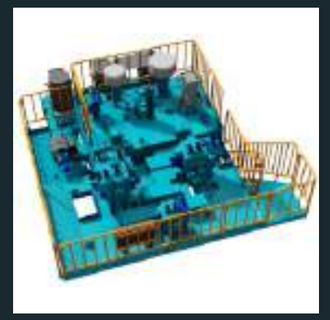
Compact Hydraulic Components

Smaller Hydraulic Oil Tank

- oil volume 24.5 MN (2,750 UST) - 6,000 liters.

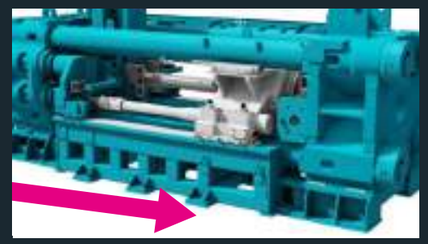
Easier Maintenance

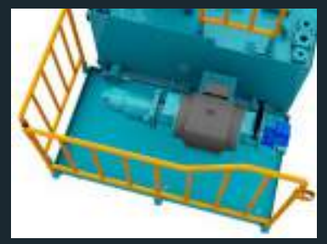
- Most hydraulic components are installed around the oil tank.



Container Seal Pump Energy Saving

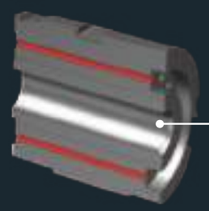
- The Variable displacement pump delivers only the amount of hydraulic oil to maintain container seal pressure.





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.

Existing System

Max Efficiency 16%

Control System

- Stand alone Type Operation panel (option).

DMI III

Data Management & human-machine Interface

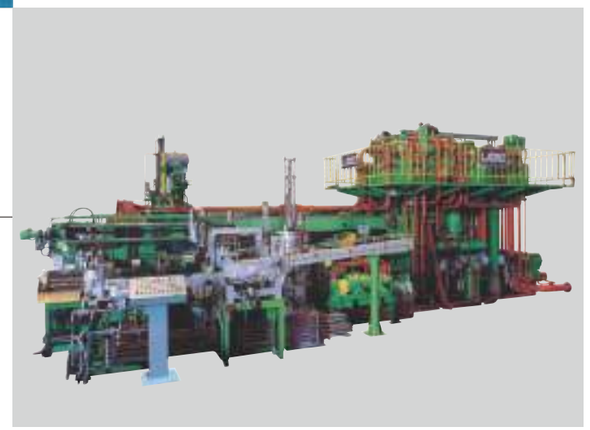
NPC-SS/3G Lineup

Extrusion Force (Nominal)		Model Number
1,650 UST	15 MN	3G 15
2,000 UST	18 MN	3G 18
2,750 UST	25 MN	3G 25
3,300 UST	30 MN	3G 30
4,000 UST	36 MN	3G 36
4,400 UST	40 MN	3G 40
5,500 UST	50 MN	3G 50
6,600 UST	60 MN	3G 60
7,000 UST	63 MN	3G 63
7,800 UST	70 MN	3G 70
8,400 UST	75 MN	3G 75
9,000 UST	80 MN	3G 80
10,000 UST	90 MN	3G 90
11,000 UST	100 MN	3G 100

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

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

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



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

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

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