

KYORI

A NIDEC PRESS & AUTOMATION CO.

TVX

**HIGH SPEED PRECISION
& LAMINATION
STRAIGHTSIDE PRESSES**

2,000 - 3,300 kN

220 - 360 US Tons Capacity

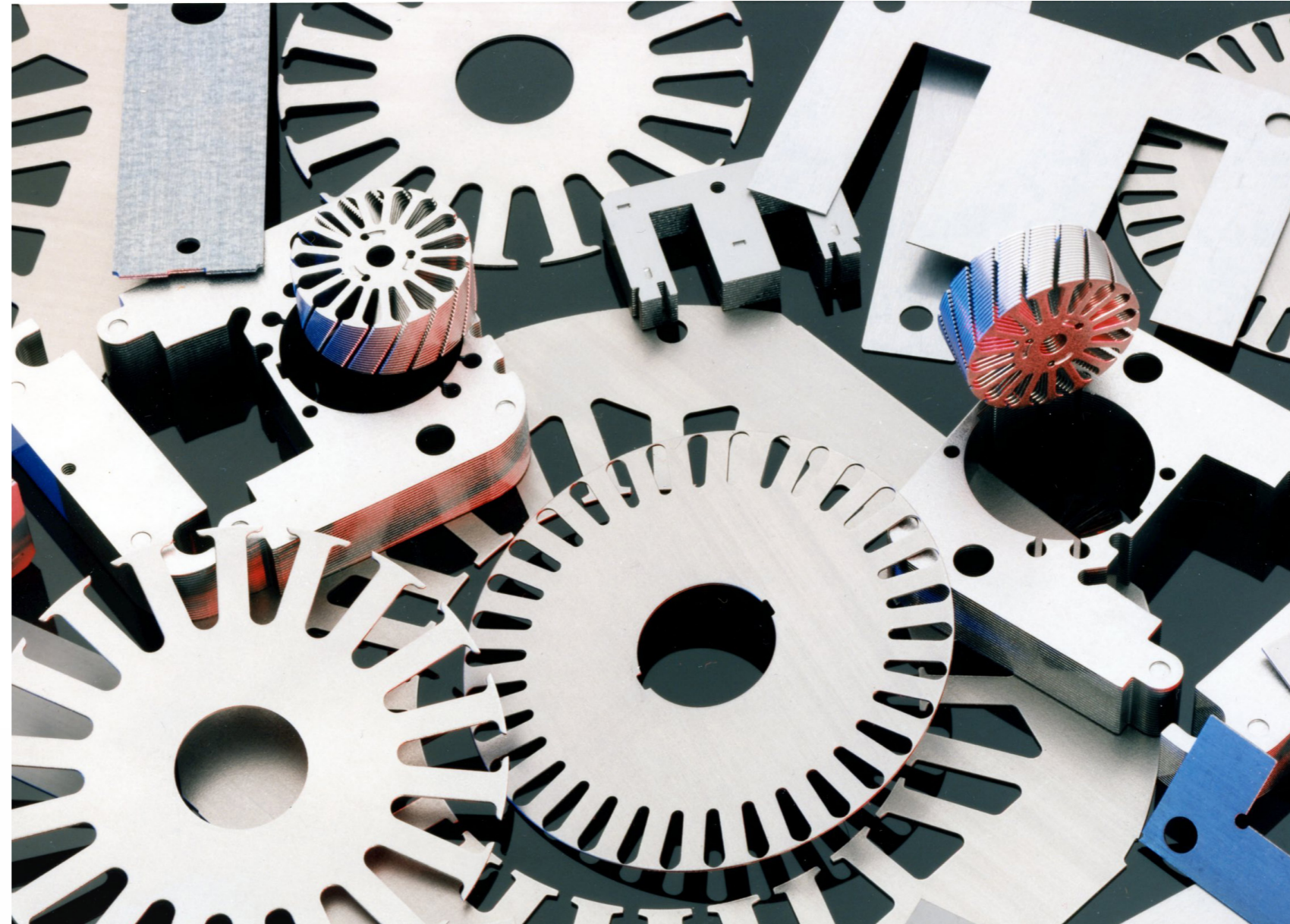


PRODUCT OVERVIEW

The TVX Press Series from Nidec Kyori offers stampers consistent performance necessary for motor core and lamination applications.

As one of the early innovators for motor core and lamination stamping, Kyori presses have earned a reputation for high precision, high performance and ease of operation from users all around the world.

With the constant drive to gain efficiency, stamp thinner materials and increase production for motor cores and lamination parts, Kyori presses continue to develop and innovate solutions to exceed the market demand.



1 Consistent bottom-dead-center repeatability creating the highest dynamic accuracy in its class.

2 Industry leading zero clearance slide-guiding enabling proper load balance and resulting in increased die life and consistent part quality.

3 Multi-plunger (three pieces for TVX-2000W & four pieces for TVX-3000W,TVX-3300-330/370) design on slide to crown connection ensures even slide force and low deflection.

4 Turnkey system integration available to simplify tool set-up and storage from integrated press and feed controls within the Vamco Quantum ACS System.

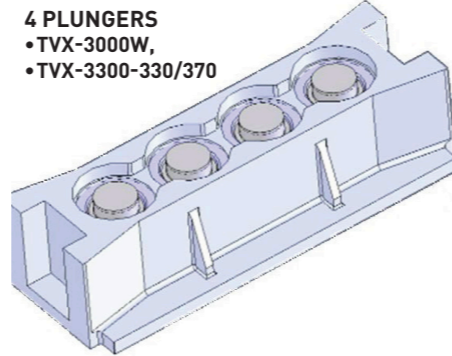
STANDARD FEATURES

Wide Bolster

The TVX press series offers a standard bolster width up to 3,700mm. This provides the ability to accommodate more complex multi-station dies.

Multi-Connection Design

- Increased versatility and control depending on the application
- Increased off-set load rigidity

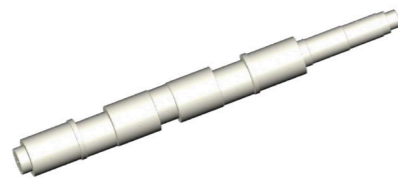


High Rigidity Frame

Minimized deflection helps to increase die life and improve part quality.

Eccentric Shaft

- Resists deflection
- Bearings are closer to the connection where the stamping force is exerted



Oil Heater/Chiller

To ensure accurate bottom-dead-center repeatability, the unit can be programmed to heat and circulate the oil prior to operation. Once the press is in production mode, the oil continues circulation through the chiller to maintain the proper, operational temperature.

Dynamic Balancer

The dynamic balancer feature allows the press to be operated at full speed with minimal inertial effect. The balancer weight reciprocates as the slide moves downward resulting in perfect balance vertically and horizontally with minimal vibration.

Die Jam Protection

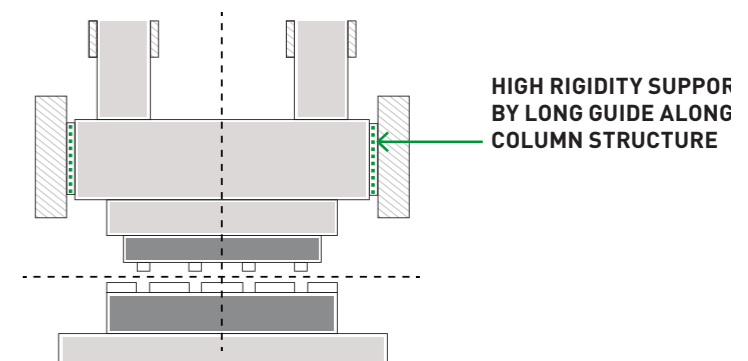
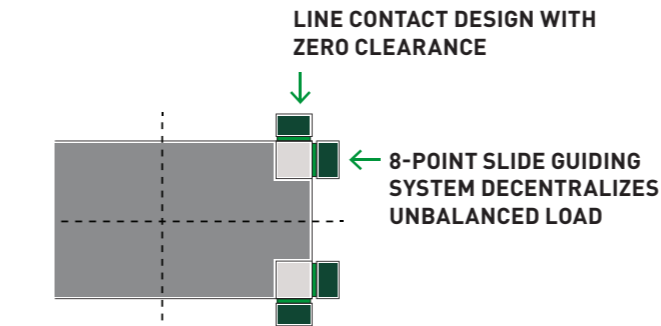
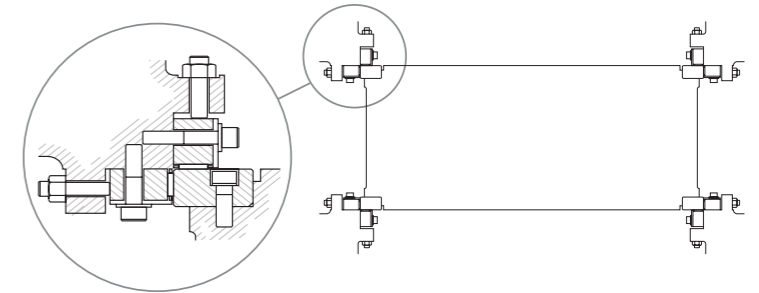
- Slide lock mechanism incorporates die jam protection failure
- Operation guided on touch panel releases oil pressure lock and enables die jam protection function

User-Friendly Operation Stand

- Large LCD touch panel and easy to use design

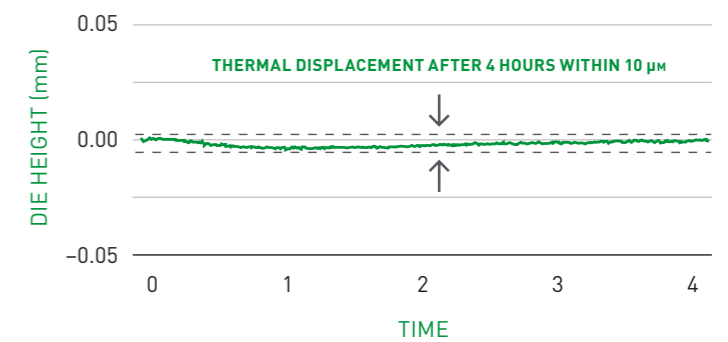
Accurate 8-Point Slide Guiding

The Kyori TVX press series use 8-point needle bearings for slide guiding because of demonstrated performance to withstand a much larger load, and the long guide ways resist off-center loading. Guide positioning makes them easy to maintain and accurately guides the punch into the die to increase die life for peak performance.



Minimal Thermal Displacement

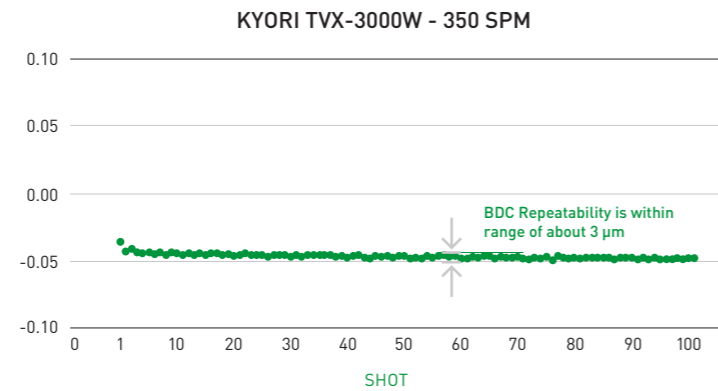
Heat control technology nurtured by small size high speed press minimize the thermal displacement resulting in better parts quality.



STANDARD FEATURES

Bottom-Dead-Center Repeatability

Bottom-dead-center repeatability results in less die wear and greater part accuracy. Reduced punch penetration results in increased die life for close-tolerance dies.



Continuous Press Lubrication

The TVX press series incorporates a pressurized recirculating oil lubrication system which supplies a continuous flow of filtered oil under pressure to all bearing surfaces ensuring reliable operation.

Combination Type Air Friction Clutch and Brake

TVX presses incorporate Kyori pneumatic clutch and brake providing maximum performance.



Additional Standard Features

- Inverter type variable speed main motor
- Electronic rotary cam switch
- Stop position automatic compensation
- Electronic crank angle indicator (operation console)
- Electric slide adjustment device (servo motor)
- Safety door (front and rear sides up / down type)
- Control box self-stand type / main unit operation stand (with casters)
- Speed meter
- Total counter (9 digits)
- Preset counter (9 digits - for stopping)
- Hour meter (7 digits)
- Micro inching (reverse available)
- Motor reverse device
- Spring shock absorber
- Both hands push buttons (on the upper side of the operation stand)
- Stock guide
- Stock end stop switch
- Mis-feed receptacle (with changeover switch)
- Over-tension stop receptacle
- 1/4B air outlet
- 100V outlet (5A)
- All stop circuit
- Working light
- Signal tower
- Photoelectronic safety device: front door only
- Die jam protection

OPTIONAL FEATURES

TVX Press Series Optional Features

- Air ejector DC (with solenoid valve)
- Cutting counter (AC 100V Output)
- Slug detector
- Stock holding cylinder
- Stock oiling roll
- Die clamps
- 3-phase 200V outlet
- Uncoiler leveler

Control System Options

For your convenience, multiple control system options are available depending on your local operational preference.

- Kyori Mitsubishi platform press control
- Kyori Siemens platform basic control
- NP&A Siemens platform European press control



OPTIONAL FEATURES

Optional Vamco Quantum ACS Integrated Solution

Nidec Press & Automation has taken the power and technology of Kyori presses and Vamco automation to offer a total system solution for motor core laminations. Our press line components offer full OEM integration prior to installation, increasing operator ease of use, system integration uptime/value and reduction of required space.

The Quantum Integrated Automation Control System provides proven management over material handling, feeding, stacking and motor core rotation processes. Founded on Vamco's Quantum Feed Intelligence, each system component is designed for performance and process efficiency.

- Coordinated system servo control
- Higher production speeds
- Reduced setup-time
- Reduced required floor space
- Reduced total system expense

CONTROL SYSTEM

LOOP CONTROL

RESOLVER

PUSH/PULL FEEDS

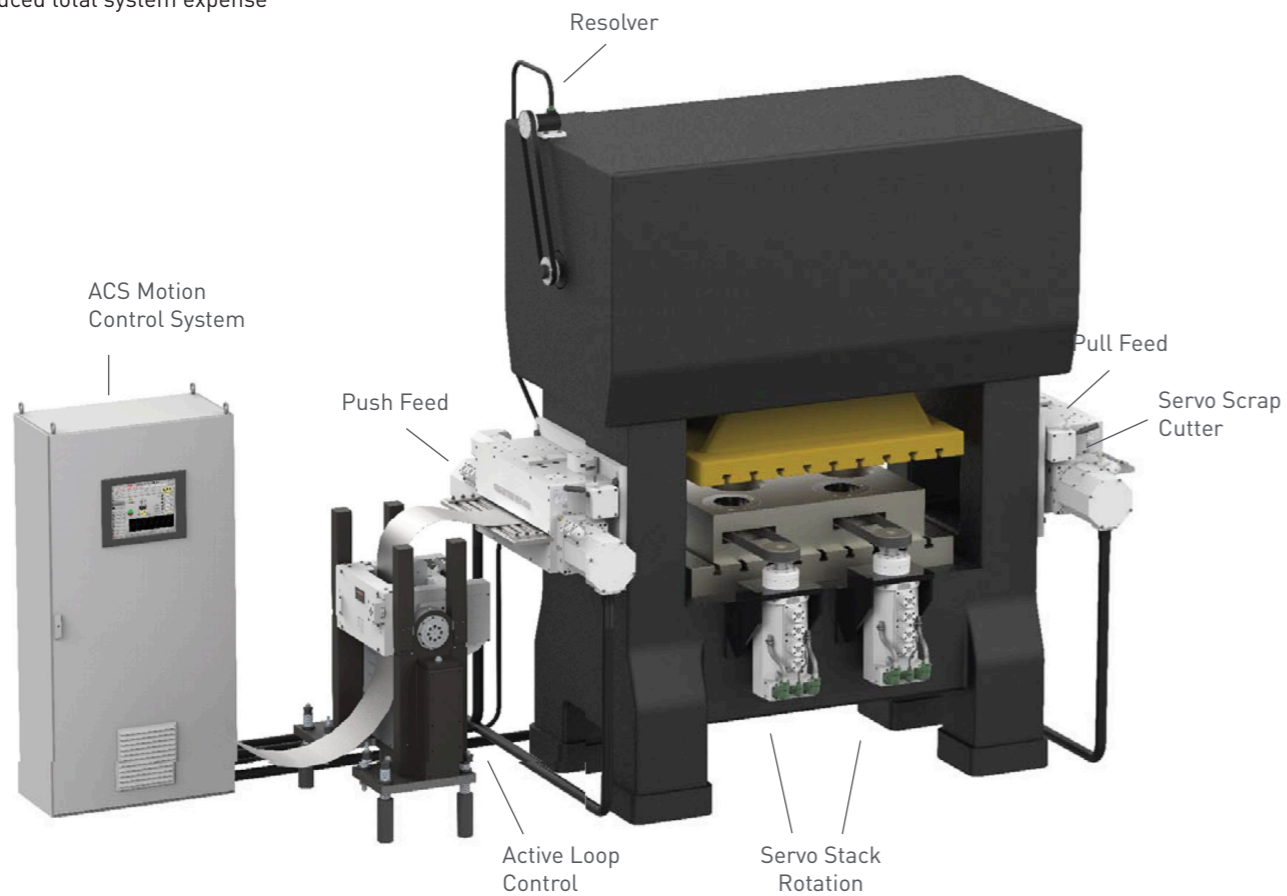
PRESS

DIE & STACK HEIGHT CONTROL

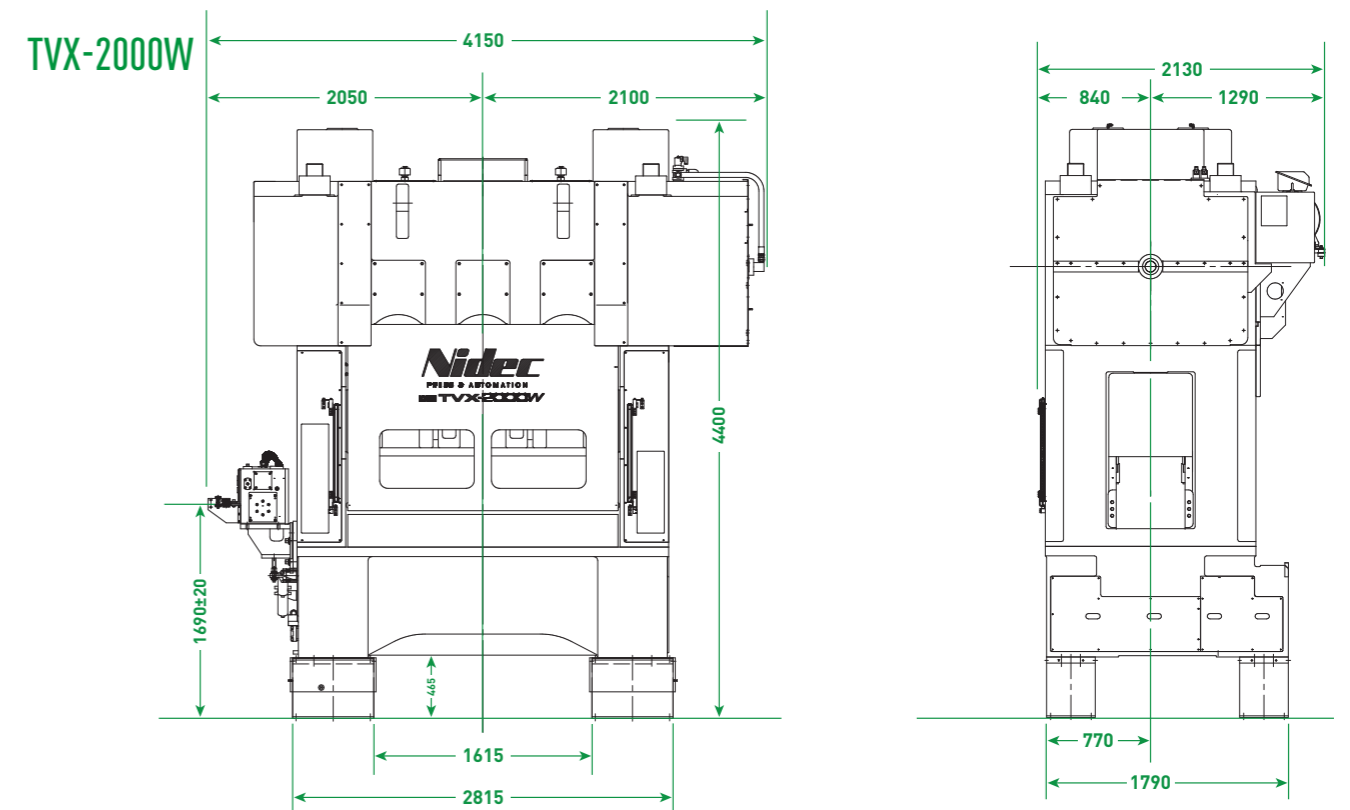
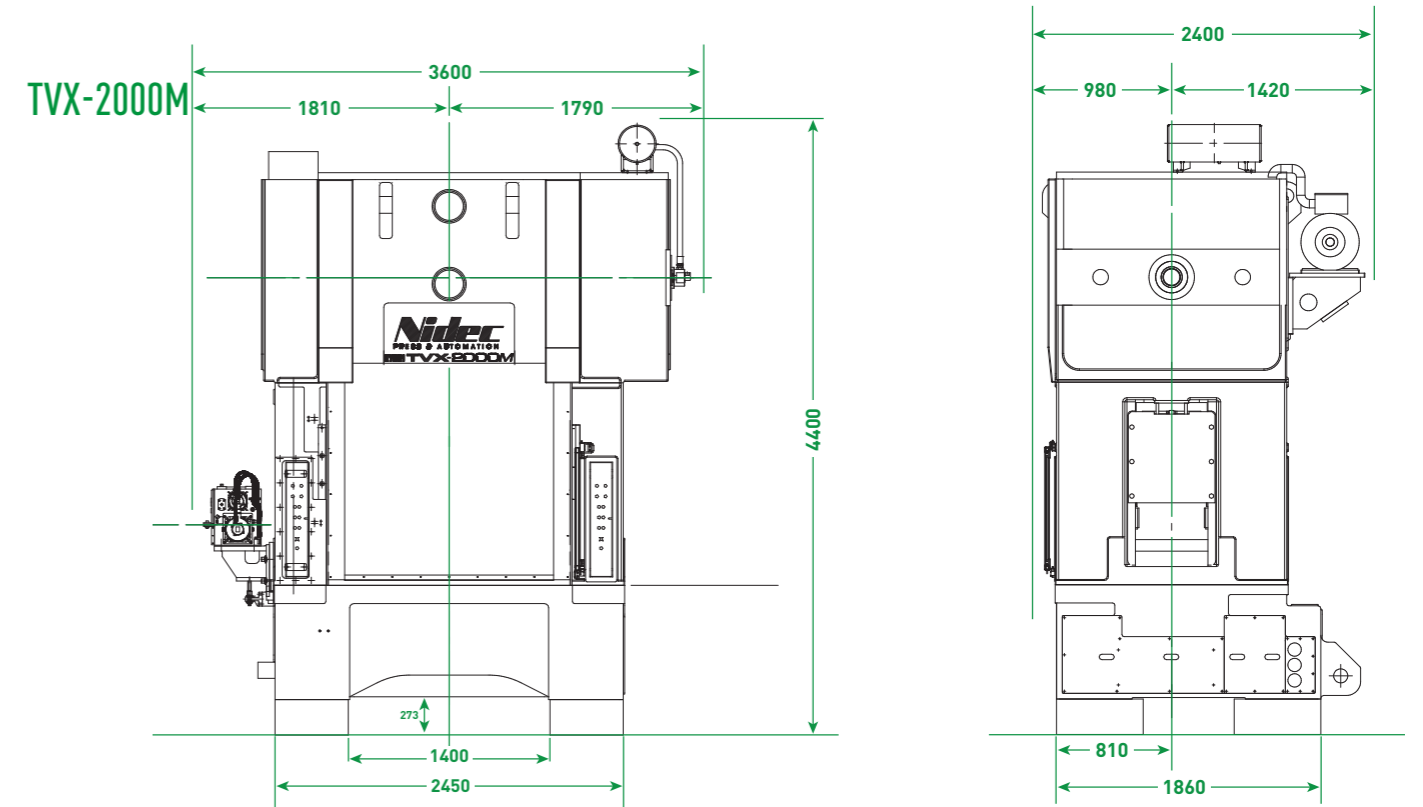
STACK ROTATION

SERVO SCRAP CUTTER

THICKNESS MEASUREMENT

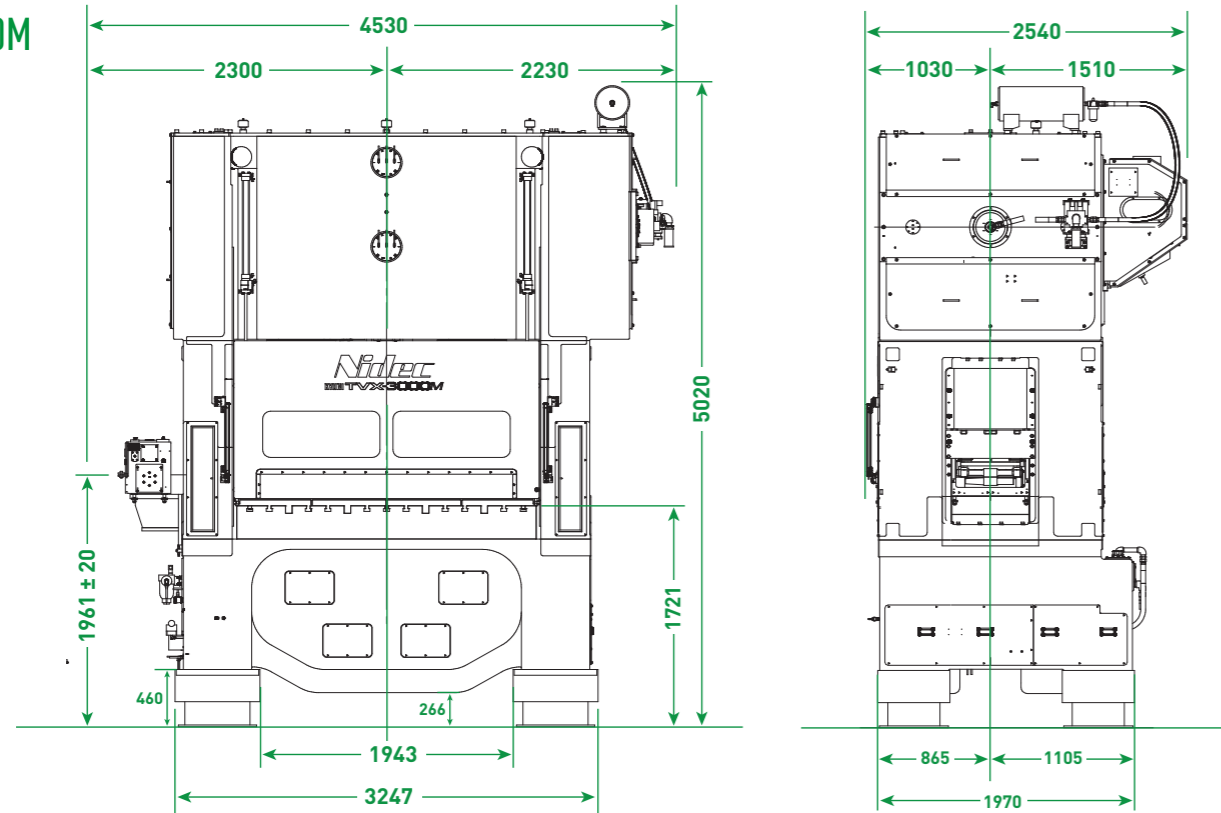


DIMENSIONS - TVX-2000

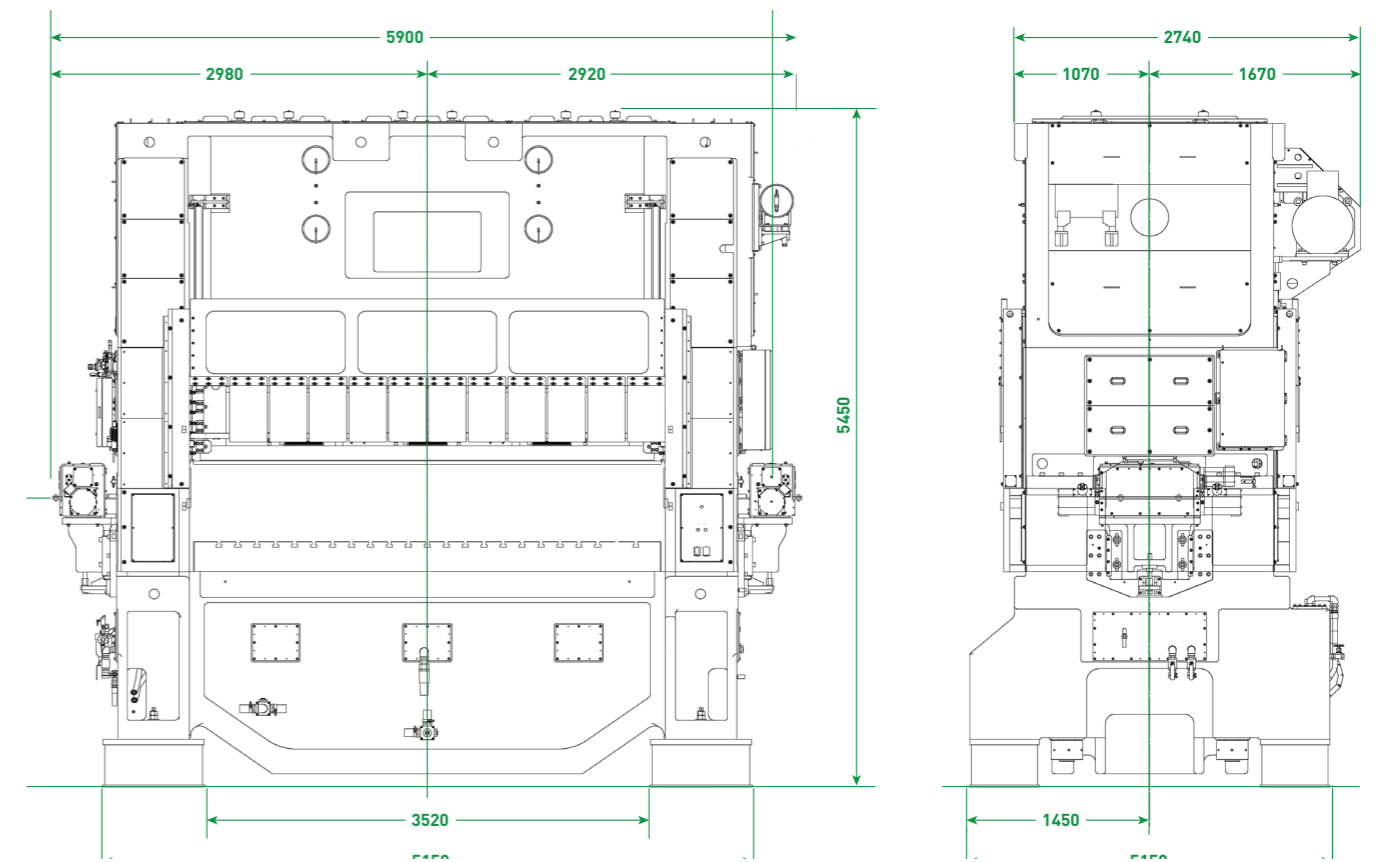


DIMENSIONS - TVX-2000W

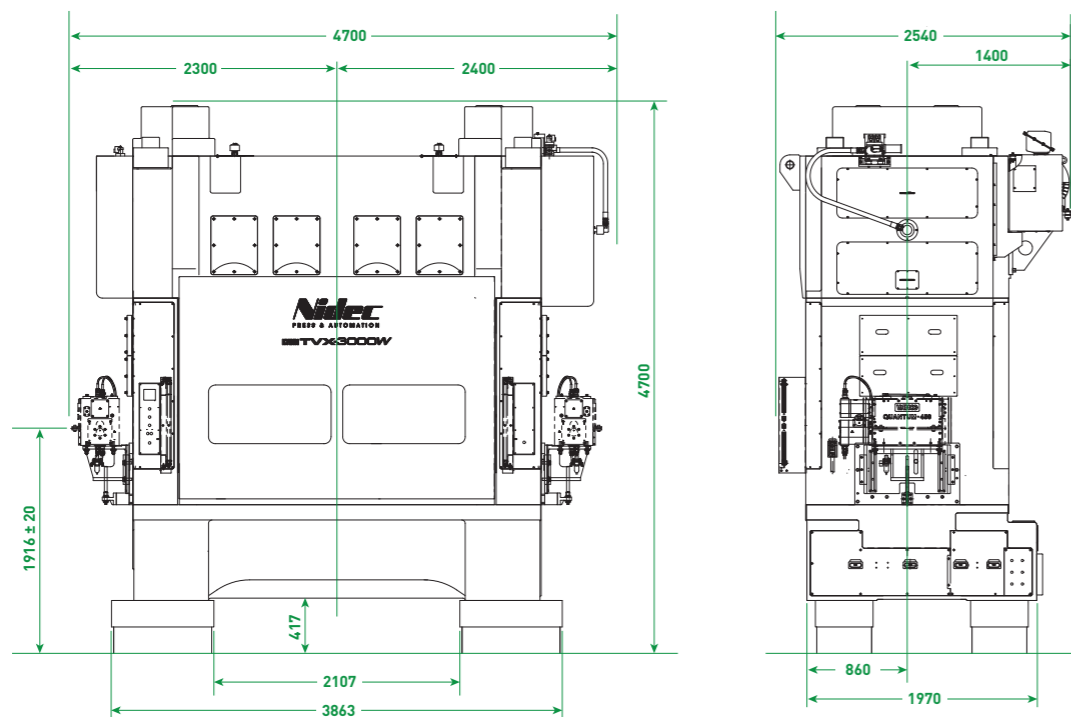
TVX-3000M



DIMENSIONS - TVX-3300-370



TVX-3000W



SPECIFICATIONS

		TVX-2000M	TVX-2000W
Capacity	kN	2,000	2,000
Stroke Length	mm	25 / 30	25 / 30
Strokes Per Minute	SPM	100-450	100-500
Force Point	mm	3.2 (1.6 at 300 spm or more)	3.2 (1.6 at 300 spm or more)
Die Height	mm	440	440
Die Height Adjustment	mm	60	60
Slide Area	mm	1,700 x 650	2,000 x 800
Bolster Size	mm	1,700 x 950	2,000 x 1000
Bolster Thickness	mm	240	240
Bed Opening	mm	1,400 x 350	1,700 x 350
Bolster Opening	mm	1,400 x 300	1,700 x 300
Main Motor	kW	45	55
JIS Static Accuracy		Special Grade	Special Grade
Upper Die Weight	kg	Max. 1,200	Max. 1,300
Gross Weight	kg	48,000	50,000

		TVX-3000M	TVX-3000W
Capacity	kN	3,300	3,000
Stroke Length	mm	25 / 30	25 / 30
Strokes Per Minute	SPM	100-410	100-450
Force Point	mm	3.2 (1.6 at 300 spm or more)	3.2 (1.6 at 300 spm or more)
Die Height	mm	480	440
Die Height Adjustment	mm	60	60
Slide Area	mm	2,300 x 800	2,700 x 1,000
Bolster Size	mm	2,300 x 1,000	2,700 x 1,000
Bolster Thickness	mm	240	240
Bed Opening	mm	2,000 x 400	2,400 x 400
Bolster Opening	mm	2,000 x 380	2,400 x 350
Main Motor	kW	55	55
JIS Static Accuracy		Special Grade	Special Grade
Upper Die Weight	kg	Max. 1,500	Max. 2,000
Gross Weight	kg	75,000	65,000

SPECIFICATIONS

		TVX-3300-330	TVX-3300-370
Capacity	kN	3,300	3,300
Stroke Length	mm	30 / 40	30 / 40
Strokes Per Minute	SPM	100 - 360/300	100 - 360/250
Force Point	mm	3.2 (1.6 at 300 spm or more)	3.2 (1.6 at 300 spm or more)
Die Height	mm	520-620	520-620
Die Height Adjustment	mm	60	60
Slide Area	mm	3,300 x 900	3,700 x 1000
Bolster Size	mm	3,300 x 1,000	3,700 x 1,200
Bolster Thickness	mm	240	240
Bed Opening	mm	3,000 x 500	3,200 x 500
Bolster Opening	mm	3,000 x 450	3,200 x 450
Main Motor	kW	55	55
JIS Static Accuracy		Special Grade	Special Grade
Upper Die Weight	kg	Max. 3200	Max. 4000
Gross Weight	kg	130,000	140,000



One Brand: A World of Resources

Nidec Press & Automation is the full service pressroom provider of choice for businesses in more than 90 countries and on six continents. Comprised of leading press room product brands, we ensure a complete offering of machinery, services and technology to meet your exact needs, enabling you to rely on one source.

Discover the freedom to achieve, to maximize and to drive your operation to exceed your goals. At Nidec Press & Automation, your success is the core of our focus and how we design our solutions to meet the rigid needs of the metal forming industry.

Choosing to work with us means you gain a constant resource with a global footprint, the brightest minds behind our solutions, and backed by regionally based OEM support ready to work as a natural extension of your team.

**Our promise to you is simple:
We're with you whenever and wherever
business takes you.**

MACHINERY

- Turn Key Systems
- Individual Components
- System/Tech Upgrades
- Industry 4.0 Software Upgrades
- Integrated Controls

METAL FORMING PRESS APPLICATIONS

- Mechanical
- Servo
- Transfer
- High-Speed & Electrical
- Electrical Vehicle (EV)
- Lamination
- Container Cupping
- Container End-Conversion
- Container Shell
- Gap/D-Frame

AUTOMATION

- Press Tending / Robotics
- Integrated Transfers
- High Speed Servo Feeds
- High Speed Gripper Feeds
- Heavy-Duty Coil Lines

GLOBAL SERVICE NETWORK

- Field Service
- Remanufacturing
- Spare Parts
- Technical Service
- Training
- Planned Maintenance
- Inspection & Audit
- Relocation
- Upgrade Services
- Engineering Services



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