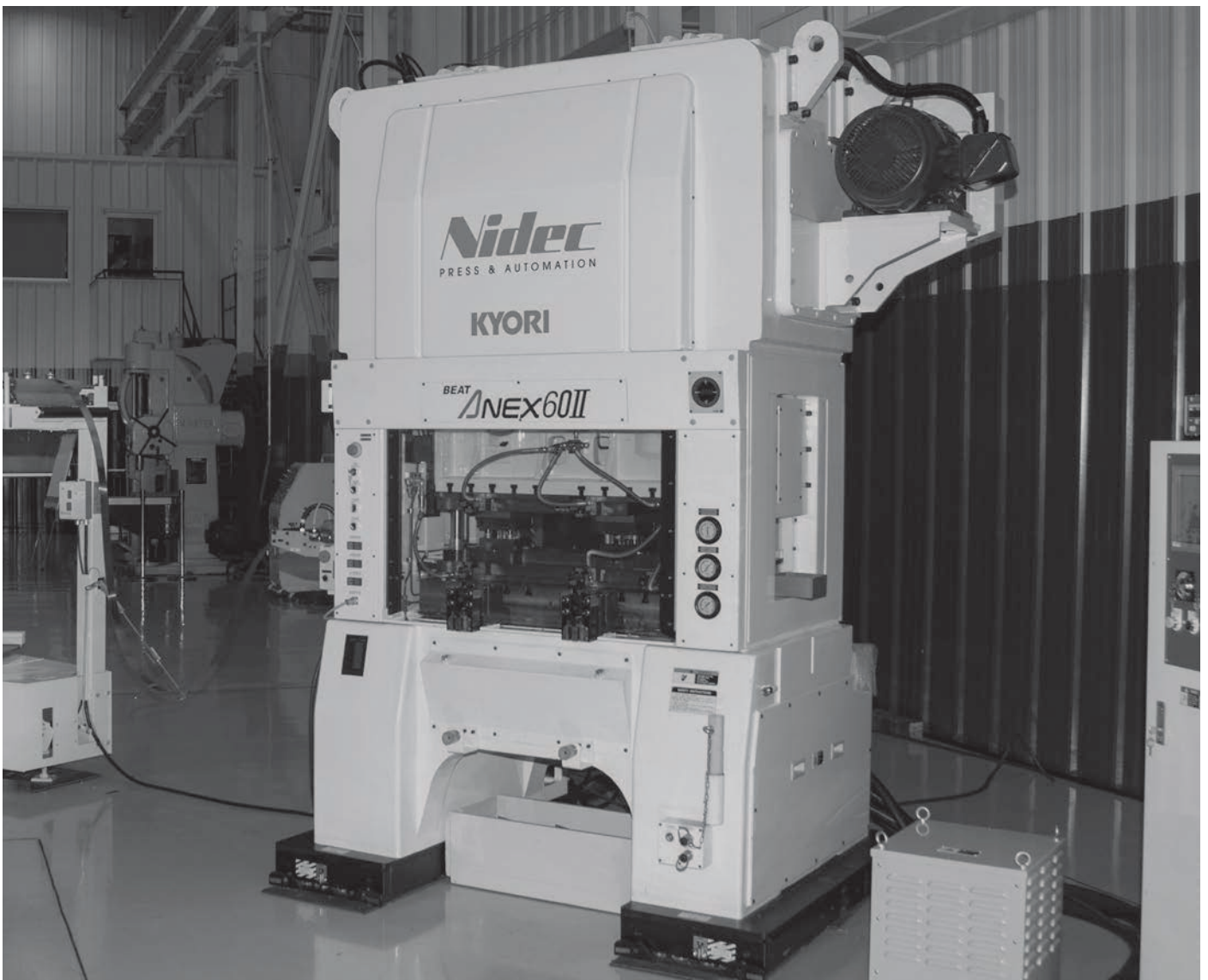


# ANEX

## HIGH PERFORMANCE FIXED STROKE PRESSES

300 - 1,650 kN



## PRODUCT OVERVIEW

With more than 6,000 installations, and 50 years of expertise in link motion press technology, Kyori's knuckle link presses have earned the reputation for high precision, high performance and ease of operation from users around the world.



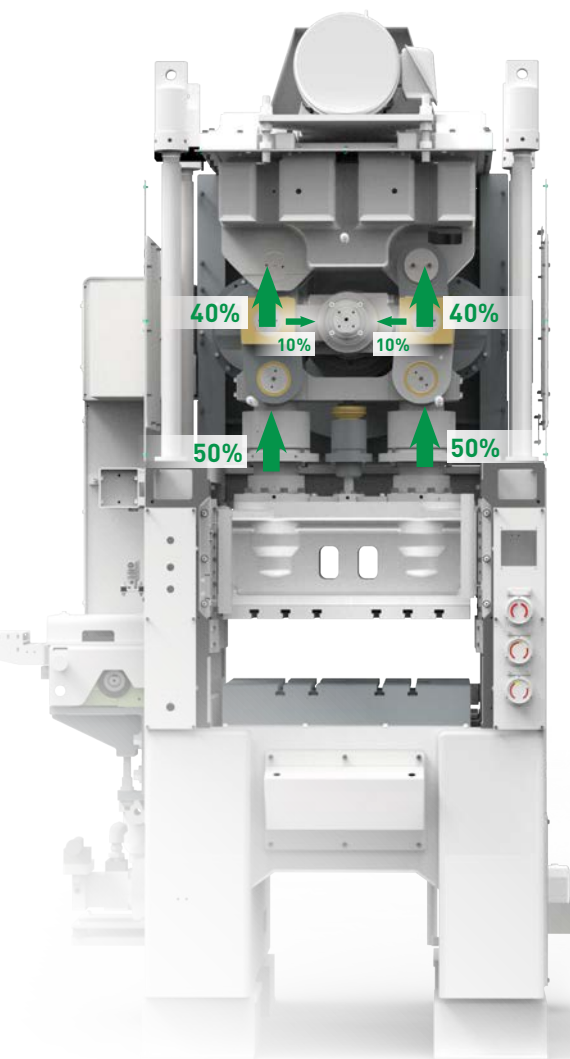
- 1 Consistent accuracy and precision for automated blanking and bending operations.
- 2 Increased tool life and part quality from knuckle link motion creating a slower slide movement through bottom-dead-center
- 3 Low maintenance costs from the rugged and proven design
- 4 Combination of our knuckle link mechanism and thermal control system, no need for thermal or dynamic stroke length compensation mechanism
- 5 Ease of tool set-up and storage from integrated press and feed controls with the Vamco SR Series feeds



# 

### Symmetrical Link Design

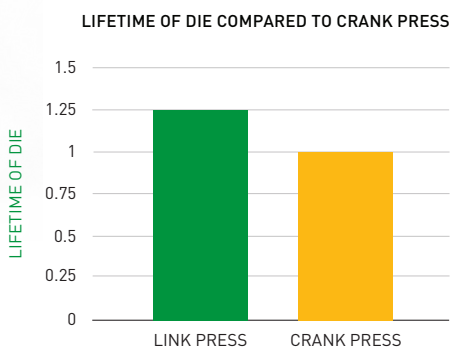
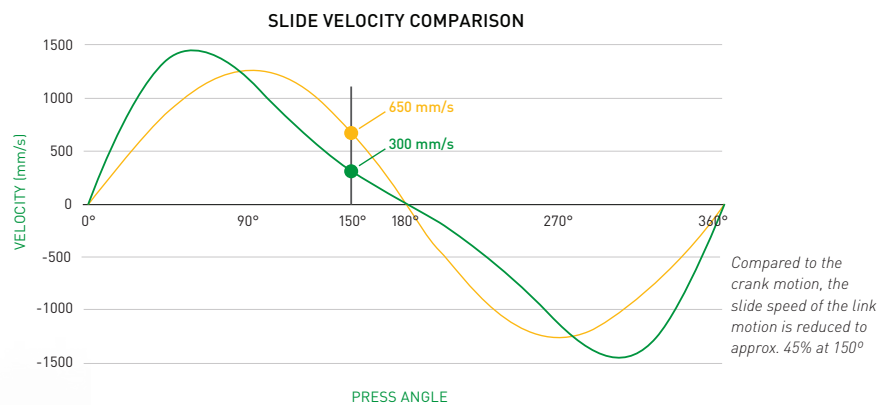
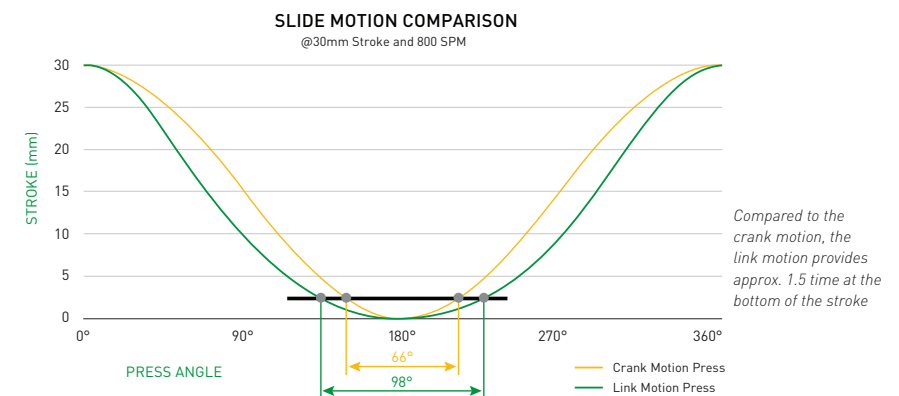
The knuckle link design of the ANEX series presses eliminates thermal displacement resulting in precise bottom-dead-center repeatability. In addition, the design contributes to greater durability, longer die life and reduced noise and vibration.



Crank press receives 100% of load to crankshaft while Kyori link presses receive 20% load on crankshaft

### Link Slide Motion

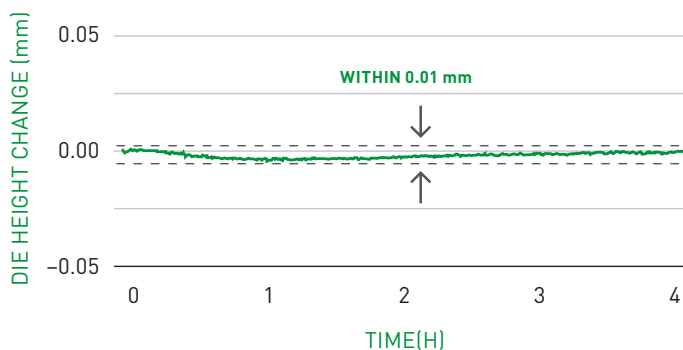
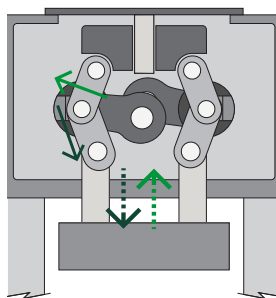
Knuckle link slide motion allows for more time on the bottom of the stroke for better part forming and reduced impact of snap-thru forces by slowing down the slide speed at the bottom, which extends press and die life. The time between re-sharpening of the dies in an ANEX series press is more than 25% greater than that of a conventional crank press.



## BENEFITS OF KNUCKLE LINK DESIGN

### Heat Generation and Thermal Cancellation

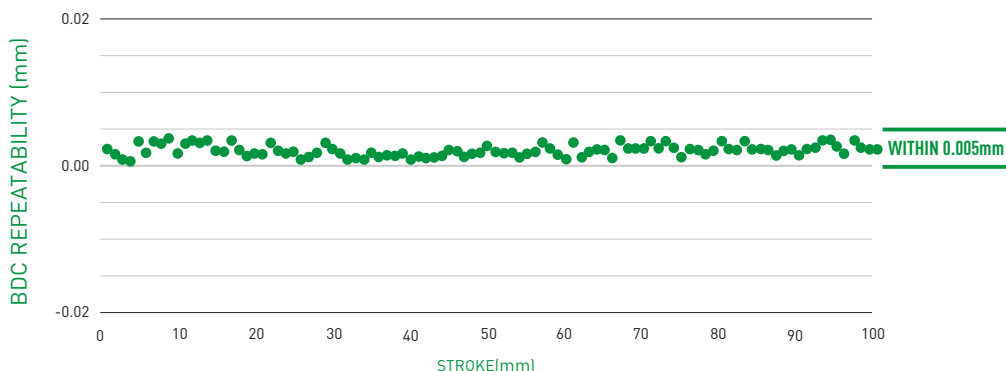
The design of our knuckle link mechanism also minimizes the B.D.C. change that can occur as the press heats up due to continuous operation. Similar to the inertial effects, thermal growth of the horizontal link is offset by thermal growth of the vertical links. Increasing the length of the horizontal link would tend to increase the shutheight, where increasing the length of the vertical links would tend to reduce the shutheight, thus cancelling each other out.



### Minimal Shutheight Variation

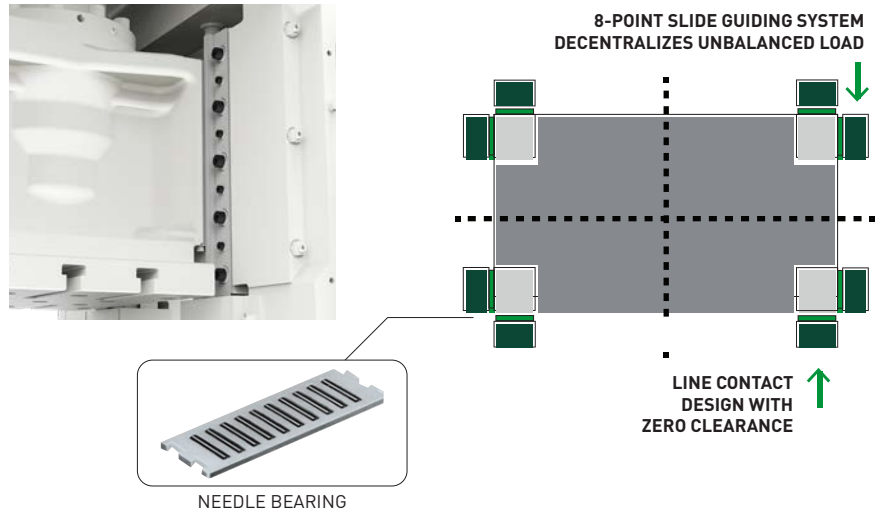
Our extremely simple knuckle link mechanism consists of large diameter pin with slider, and high-strength link, providing very high rigidity and strength.

This link mechanism can slow down the slide speed at the bottom dead center area compared to a normal crank mechanism, which reduces the inertia of the slide and reduces the impact on the dynamic change in shutheight.



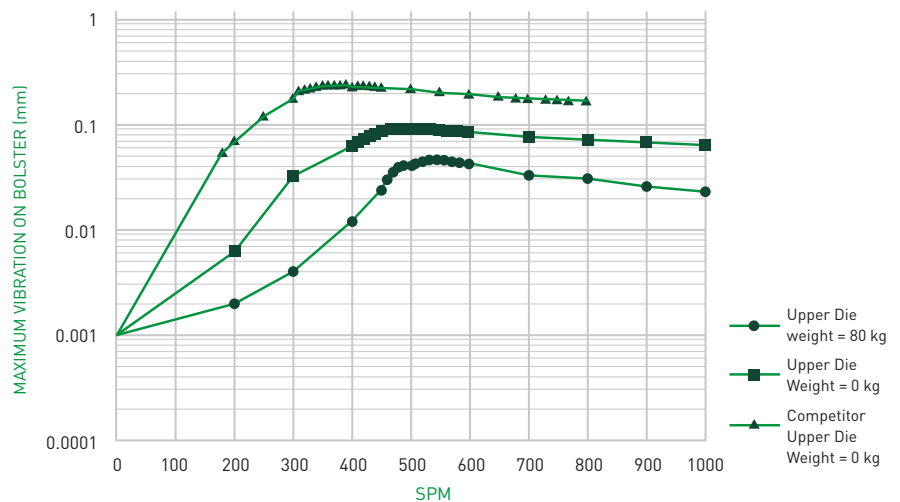
## Accurate Slide Guiding

Kyori ANEX presses use 8-point needle bearings for slide guiding as opposed to competitors' post guiding systems. Needle bearings are able to withstand a much larger load and the long guide ways resist off-center loading. The positioning of the guides makes them easy to maintain.



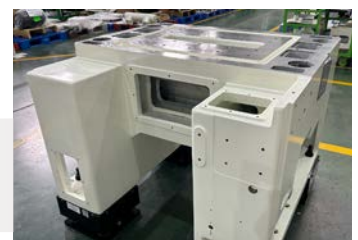
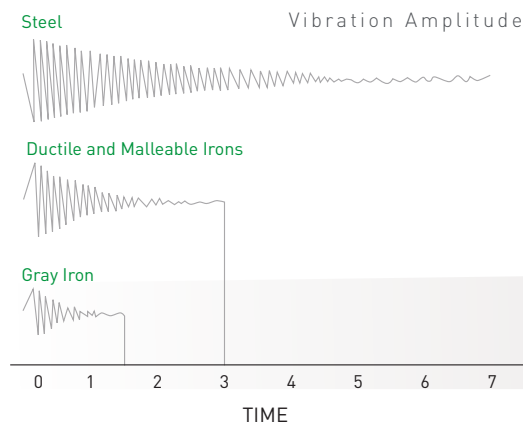
## Dynamic Balancer

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.



## 40 Grade Cast Iron Frame Construction

This construction provides the compressive strength and vibration dampening characteristics that provide greater die life and part accuracy. Iron has 2.5 to 4.5 times the dampening capability of steel. Therefore, the ANEX utilizes castings where applicable in its beds, crowns and uprights to dampen vibration and noise created in high speed operation and snap-thru applications.



BED



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## STANDARD FEATURES

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### Servo Drive Slide Adjustment

The slide adjustment on the ANEX press is driven by a servo motor and the exact shutheight is displayed on the press console and the repeatability is within 0.01 mm.

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### Reduced Noise

The reduction of noise is inherent in the construction of the knuckle link mechanism used in Kyori ANEX series presses. The strong shock absorbing bearing structure contributes to the production of less high frequency noise.

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### Micro Inching

Kyori ANEX users can enjoy the feature of full tonnage micro-inching of the press to assist with die set-up and troubleshooting.

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### Die Doors

These standard safety features include safety doors at the front and rear of the press.

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### 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 is circulated through the chiller to maintain the proper temperature. The temperature is achieved automatically by the press SPM.

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### Quick Open Return

This quick open return function allows die height to move upward automatically while checking die or cleaning, and to return to the original position automatically after checking the die or cleaning.

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### Shock Mounts

Isolation/leveling mounts are included as standard equipment on Kyori ANEX Series presses.

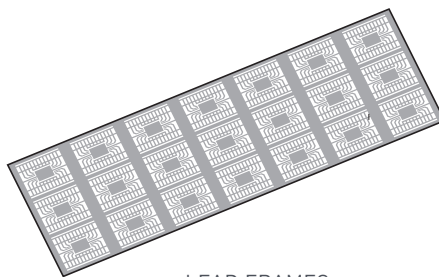
## Additional Standard Features

- VFD controlled main motor
- Combination type air friction Clutch/ Brake
- Servo drive slide adjustment device
- Dynamic balancer
- Electronic rotary cam switch
- Automatic stop angle correction function
- Electronic crank angle indicator
- Mitsubishi PLC control
- Touch panel
- Speed meter
- Total counter (9-digit electronic type)
- Preset counter (9-digit electronic type)
- Hour meter (7-digit electronic type)
- Tool parameter storage (100)
- Operation box self-stand type
- Motor reverse device (for stick release)
- Misfeed plug/socket (with changeover switch)
- Micro inching (reverse available)
- Pneumatic control unit
- Circulation type lubrication unit
- Safety doors (front & rear)
- Both hands inching buttons
- Isolation mounts
- Oil heater/chiller (Automatic Optimal Control)
- Material end stop switch (proximity)
- Material lube tank (with solenoid valve)
- Material guide (to end of bolster)
- Immediate stop outlet
- All stop circuit (without timer)
- 3-phase Outlet
- Air outlet (1/4B)
- Die area light
- Quick access feature

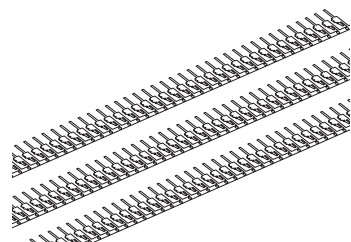
## Optional Features

- Air ejector (with solenoid valve)
- Die height detector
- Load monitor
- Material oiling roll
- Flywheel brake
- Material holding cylinder
- Cutting counter
- Die clamps (upper and lower)
- Die lift rails
- Barring

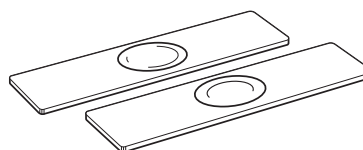
## Machining Examples



LEAD FRAMES



ELECTRICAL CONNECTORS



BATTERY LIDS

SPECIFICATIONS

		ANEX-30 II													
Press Force	<i>kN</i>	300													
Stroke Length	<i>mm</i>	5	8	10	13	14	16	20	25	32	35	5	8	10	
Strokes Per Minute	<i>SPM</i>	1400	1300	1300	1300	1250	1200	1200	1050	900	800	1600	1500	1500	
Die Height	<i>mm</i>	240										235			
Die Height Adjustment	<i>mm</i>	40										35			
Slide Size	<i>mm</i>	600 x 300													
Bolster Size	<i>mm</i>	600 x 400													
Bridge at Bed Opening	<i>Yes/No</i>	No													
Upright Side Width Opening	<i>mm</i>	160													
Max. Upper Die Weight	<i>kg</i>	80													
Max. Material Width	<i>mm</i>	120													

SPECIAL SHORT STROKE

SPECIAL LONG STROKE



ANEX-30 II H						ANEX-40 II							ANEX-40 II H						
300						400							400						
13	14	16	20	25	32	10	16	20	25	30	32	36	10	16	20	25	30	32	36
1500	1500	1400	1350	1150	1000	1100	1000	1000	900	850		600	1300	1200	1100	1000	950		700
240						240						235	240						235
40						50						45	50						45
600 x 300						750 x 340							750 x 340						
600 x 400						750 x 500							750 x 500						
No						No							No						
160						200							200						
80						Max. 105 or 105-155							Max. 105 or 105-155						
120						160							160						

SPECIFICATIONS

		ANEX-40 II W						ANEX-40 II EW				
Press Force	<i>kN</i>	400						400 (Aluminum alloy slide)				
Stroke Length	<i>mm</i>	15	20	25	32	40	50	12	20	25	32	40
Strokes Per Minute	<i>SPM</i>	950	850		800	700	550	1100	1000	950	850	750
Die Height	<i>mm</i>	240				235	225	300				
Die Height Adjustment	<i>mm</i>	50				45	35	50				
Slide Size	<i>mm</i>	950 x 450						1100 x 450				
Bolster Size	<i>mm</i>	950 x 600						1100 x 600				
Bridge at Bed Opening	<i>Yes/No</i>	No						No				
Upright Side Width Opening	<i>mm</i>	200						200				
Max. Upper Die Weight	<i>kg</i>	150 or 150-180					155	150 or 150-180				
Max. Material Width	<i>mm</i>	160						160				

SPECIAL SHORT STROKE

SPECIAL LONG STROKE

ANEX-60 II							ANEX-60 II H							ANEX-60 II W						
600							600							600						
10	20	25	32	35	40	50	10	20	25	32	40	50	64	25	32	40	45	50	60	
900	750		650	600	500	400	1000	850	820	750	600	500	400	700	600	450	400	350	400	
300					295	280	300				295	280	285	340		335	325	320	320	
80					75	60	80				75	60	50	80		75	65	60	50	
1030 x 500							1030 x 500							1280 x 500						
1100 x 600							1100 x 600							1350 x 600						
No							No							No						
230							230							230						
450							350					180	500					400		
190							190							190						

SPECIFICATIONS

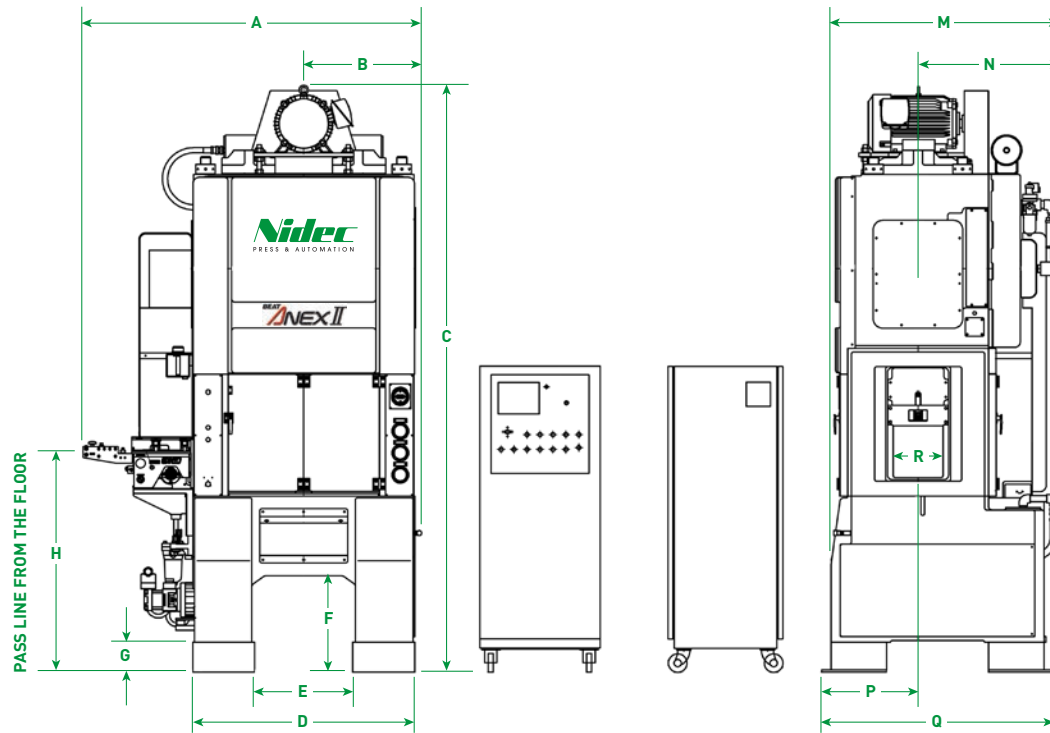
		ANEX-80 II						ANEX-80 W				
Press Force	<i>kN</i>	800						800				
Stroke Length	<i>mm</i>	20	25	32	36	45	50	25	32	46	60	72
Strokes Per Minute	<i>SPM</i>	700	600	550	500	400	400	500	450	400	350	200
Die Height	<i>mm</i>	320				310	305	320		310	295	295
Die Height Adjustment	<i>mm</i>	80				70	65	80		70	55	55
Slide Size	<i>mm</i>	1080 x 580						1380 x 580				
Bolster Size	<i>mm</i>	1200 x 800						1500 x 800				
Bridge at Bed Opening	<i>Yes/No</i>	No						Yes				
Upright Side Width Opening	<i>mm</i>	280						280				
Max. Upper Die Weight	<i>kg</i>	500						500				
Max. Material Width	<i>mm</i>	240						240				

SPECIAL SHORT STROKE

SPECIAL LONG STROKE

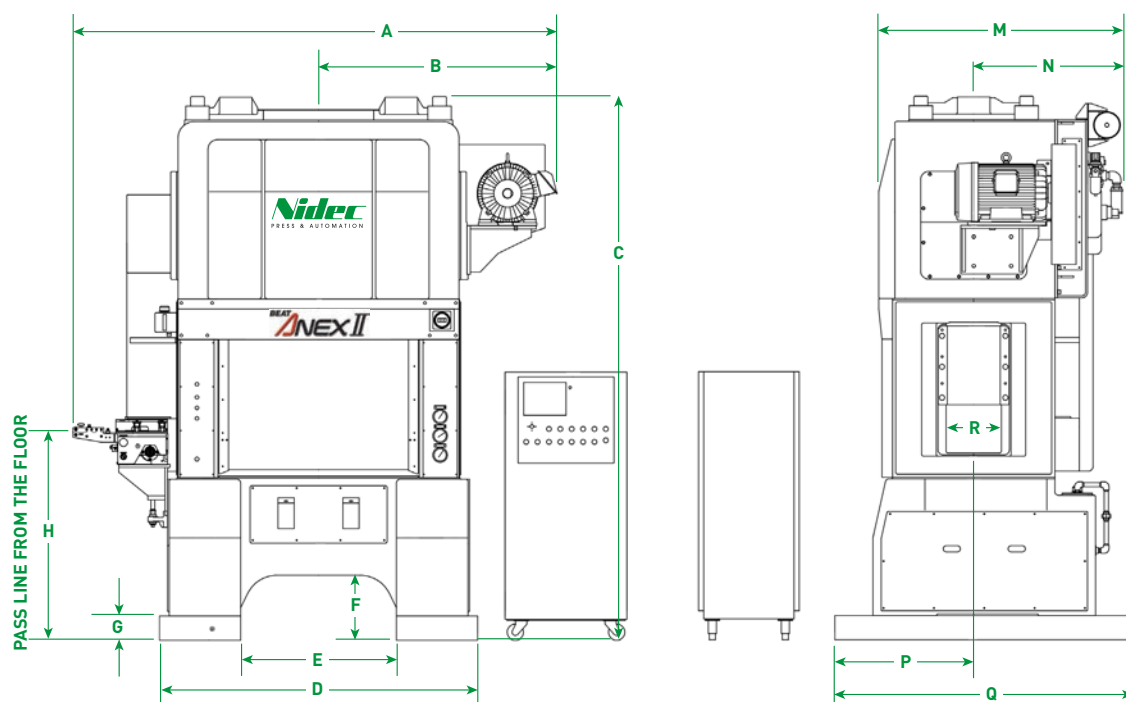
ANEX-125					ANEX-125 SH			ANEX-150					ANEX-165				
1250					1250			1500					1650				
25	36	50	60	75	20	25	36	20	25	36	50	60	20	25	40	60	70
400	350	250	250	200	600	600	400	400	400	300	330	250	420	400	320	235	200
350		330		310	350			350			330		350				
80		60	55	40	80			80			60		80				
1480 x 600					1080 x 600			1480 x 600					1890 x 800				
1600 x 900					1200 x 900			1600 x 900					2000 x 1000				
Yes					Yes			Yes					Yes				
360					360			410					478				
600					350			900					1300				
320					320			320					450				

## DIMENSIONS



	ANEX-30 II / 30 II H	ANEX-40 II / 40 II H	ANEX-40 II W	ANEX-60 II	ANEX-60 II H	ANEX-60 II W
A	1780 mm	1850 mm	2050 mm	2840 mm	2430 mm	3090 mm
B	610 mm	645 mm	745 mm	1420 mm	1010 mm	1545 mm
C	3075 mm	3180 mm	3185 mm	3080 mm	3520 mm	3170 mm
D	1160 mm	1200 mm	1530 mm	1900 mm	1900 mm	2150 mm
E	520 mm	530 mm	521 mm	900 mm	900 mm	1150 mm
F	530 mm	521 mm	521 mm	550 mm	550 mm	550 mm
G	160 mm	161 mm	161 mm	150 mm	150 mm	150 mm
H	1120±20 mm	1191±20 mm	1191±20 mm	1240±20 mm	1240±20 mm	1240±20 mm
M	1315 mm	1300 mm	1300 mm	1490 mm	1490 mm	1490 mm
N	780 mm	830 mm	830 mm	945 mm	945 mm	945 mm
P	535 mm	520 mm	530 mm	705 mm	705 mm	705 mm
Q	1210 mm	1250 mm	1270 mm	1540 mm	1540 mm	1540 mm
R	160 mm	200 mm	200 mm	230 mm	230 mm	230 mm





	ANEX-80 II	ANEX-80 II SH	ANEX-80 W	ANEX-125	ANEX-125 SH	ANEX-150	ANEX-165
A	3000 mm	2680 mm	3280 mm	3520 mm	3140 mm	3520 mm	4015 mm
B	1470 mm	2320 mm	1620 mm	1670 mm	1525 mm	1670 mm	1865 mm
C	3380 mm	3400 mm	3380 mm	4070 mm	3990 mm	4230 mm	4360 mm
D	1960 mm	1850 mm	2260 mm	2580 mm	2240 mm	2880 mm	2913 mm
E	960 mm	850 mm	1260 mm	1320 mm	980 mm	1320 mm	1637 mm
F	400 mm	400 mm	400 mm	515 mm	515 mm	520 mm	463 mm
G	150 mm	150 mm	150 mm	200 mm	200 mm	205 mm	448 mm
H	1280±20 mm	1280±20 mm	1280±20 mm	1630±20 mm	1630±20 mm	1630±20 mm	1498 mm
M	1555 mm	1590 mm	1560 mm	1730 mm	1730 mm	1730 mm	1950 mm
N	970 mm	1000 mm	970 mm	1050 mm	1050 mm	1050 mm	1090 mm
P	855 mm	855 mm	820 mm	825 mm	825 mm	935 mm	790 mm
Q	1840 mm	1840 mm	1840 mm	1780 mm	1780 mm	2000 mm	1710 mm
R	280 mm	280 mm	280 mm	360 mm	360 mm	360 mm	540 mm

## FEED EQUIPMENT INTEGRATION

### Kyori GX High Precision Gripper Feeder

The GX Series Feed is designed to feed materials for ultra-precision and high speed press stamping applications. It is especially suitable for parts such as narrow pitch connectors, micro electronic parts and semiconductor lead frames.

- Feed length is adjustable with a manual handle and digital display at a resolution of 0.01 mm and feed length can be fine-tuned while press is running

- The open-front gripper design allows for easy material threading and the material thickness is easily changed with the turn of two dials
- No lubrication contamination due to location of material passline
- The gripper is designed to hold thin plates or plated materials vertically eliminating damage so parts are in optimum condition for secondary machining

- The gripper can be customized to suit the shape of the material to be stamped



		GX-20HD3			GX-40HSD1	GX-40HD1	GX-40			GX-80			GX-120			GX-150	GX-350*		
Max. Speed	SPM	3000			2000	2000	1400			1000	800		750			300	600		
Feed Length	mm	20	10		30	30	40			80			100			150	100		
Width of Material	mm	5-40			5-40	5-40	8-80			8-80			8-120			8-120	100-350		
Thickness of Material	mm	max. 0.5			max. 0.5	max. 0.5	max. 2.0			max. 2.0			max. 2.0			max. 1.0	max. 2.0		
Installation Position		L-R			L-R	L-R	L-R			L-R			L-R			L-R	L-R		
Feed Direction		L→R R→L			L→R R→L	L→R R→L	L→R R→L			L→R R→L			L→R R→L			L→R R→L	L→R R→L		
Feed Angle	deg	165°	150°	120°	150°	165°	165°	150°	120°	165°	150°	120°	165°	150°	120°	165°	165°	150°	120°
Release Amount	mm	0.15			0.2	0.2	0.2			0.5			0.7			0.4	0.7		
Grip Margin	mm	0.05			0.1	0.1	0.1			0.1			0.1			0.05/0.1	0.1		
Release Angle	deg	60°			60°	60°	60°			60°			60°			60°	60°		
Width of Grip	mm	22			22	22	50			50			80			80	Upper Jaw50×2 Lower Jaw 160		
Center Groove Width	mm	3			3	3	6			6			6			6	6		

\*For light weight materials only (ex. Films)

## Kyori GX*i* High Precision Gripper Feeder

The GX*i* Series Feed can automatically set items listed below by choosing die number which can be registered at press touch panel (up to 100 dies)

- Feed pitch
- Material width
- Material thickness
- Release start angle



		GX-40 <i>i</i>			GX-80 <i>i</i>			GX-120 <i>i</i>		
Feed Length	mm	0-40			0-80			0-100		
Width of Material	mm	8-80			8-80			8-120		
Thickness of Material	mm	max. 2.0			max. 2.0			max. 2.0		
Installation Position		L-R			L-R			L-R		
Feed Direction		L→R R→L			L→R R→L			L→R R→L		
Feed Angle	deg	165°	150°	120°	165°	150°	120°	165°	150°	120°
Release Amount	mm	0.2			0.5			0.7		
Grip Margin	mm	0.1			0.1			0.1		
Release Angle	deg	60°			60°			60°		
Width of Grip	mm	50			50			80		
Center Groove Width	mm	6			6			6		

# FEED EQUIPMENT INTEGRATION

## Vamco SR Feed Integration

Designed to consistently perform and withstand the vibration of the most severe stamping applications, the SR series is directly mounted to the press and is electronically cammed to the crankshaft ensuring the highest feeding performance.

- Double axis servo feed (feed rolls & pilot release)
- Electronic camming
- Fully-programmable feed & release settings
- Powered upper & lower feed rolls
- Durable cast frame construction
- Advanced monitoring diagnostics
- Push/pull configurations and DHS (3-axis) versions available for increased performance
- Integrated press and feed HMI screen available for set-up and storage from one screen



	SR-150	SR-250
Material width (max)	150 mm	250 mm
Material thickness (max)	2.0 mm	3.0 mm
Feed roll width (std)	25 mm	50 mm
Feed roll width (max)	50 mm	150 mm
Indexes/min (max)	1500/min	1200/min

## SYS Feed and Push/Pull System Integration

- Integration of servo-feeder in tandem version or single version or push-pull feed systems
- Integration of synchronous sprocket wheel applications
- Laser interface double or triple pluggable via Harting connector, communication to Trumpf-Laser or IPG Laser depending on press size





## 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.

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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

Turnkey 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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## One Brand: A World of Resources

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