



# HIGH PERFORMANCE FIXED STROKE PRESSES

300 - 1,500 kN 30 - 150 Metric Tons



# **KYORI**

# **PRODUCT OVERVIEW**

# **ADVANTAGES OF ANEX MODELS**

Kyori presses are recognized worldwide for their high performance, precision and ease of operation. The link motion presses of the Kyori ANEX series are among the most powerful fixed-stroke presses in the high-speed segment, offering users longer tool life and high efficiency.

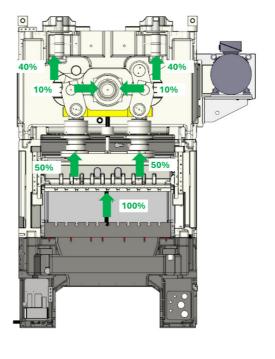


High dynamic link motion fixed stroke design

- 2 Modern, high-performance press control in modular design
- 3 All ANEX models available in different stroke lengths
- 4 Highly efficient drive technology ensuring lower Co2 footprint
- 5 Tool height remains constant regardless of the stroke length - reducing set-up and feed times
- 6 Customized solutions with Nidec SYS components as required
- 7 Industry 4.0 capable via OPC-UA interface

### Robust Mechanical Design

- Kyori Link Motion Design:
  - Creating a slower slide movement through bottom-dead-center
  - Particularly advantageous for forming operations / pptimum part quality
  - Option for higher upper die weight
  - 8-point needle roller bearing, installed in long guideways to prevent the slide from tilting under off-center loads





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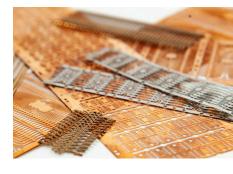
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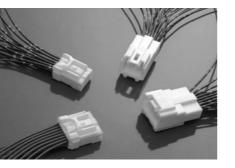
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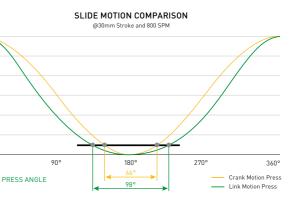
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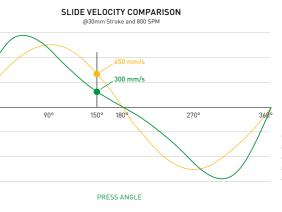






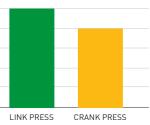


Compared to the crank motion, the link motion keeps the slide on the bottom of the stroke approx. 1.5 times longer



Compared to the crank motion, the slide speed of the link motion is reduced to approx. 45% at 150°

#### LIFETIME OF DIE COMPARED TO CRANK PRESS



Compared to the crank motion, the die life with link motion is 1.25 times longer 3

# **PCS100 CONTROL BY NIDEC SYS**

### **Press Control Properties**

### State-of-the-Art Control Components

- Beckhoff TwinCat 3.1 Realtime-System
- Beckhoff TWINSafe safety system
- Water-cooled servo drive technology
- Ultra-compact cabinet design for minimum footprint

### Integrated Measuring and Monitoring Functions

- Optimized process through simple operation via the control system
- Built-in maintenance counter
- Pressure-monitored lubrication system
- OPC-UA interface

### Simple Connection of Peripheral Devices

- Faster integration and maximum productivity
- Up to four standard peripheral interfaces *e.g.* for unwind/rewind
- Special peripherals, such as Trumpf/IPG laser integration, *available on request*

### Standby Energy Functions

- 1st stage: Reduction of the main drive to the number of strokes
- 2nd stage: Reduction of the main drive to speed 0 (standstill)
- 3rd stage: Oil pump and air valve shutdown

## High-Efficiency Water-Cooled AC Servo Motor

- Current monitoring for early fault detection
- Increased working volume in lower speed range

### Semi-Automatic Plunger Correction

- Adaptation to the current stroke rate of the main motor when disengaged
- Correction value freely programmable depending on speed





# **OPTIONAL FEATURES**

# Feed and Push/Pull System Integrations

- Can be used as right or left feed
- Quick change system for feed rollers
- Inlet with scale for side adjustment
- Push/pull configurations
- Compact design
- Adjustable airflow
- Sensor for belt end monitoring

### Additional Options

- Profiled rollers
- Rollers with special coating
- Strip thickness measurement

### **Tool Monitoring**

### **Integrated Measurement and Monitoring Modules**

- Tool Safety Inputs (Digital Inputs): » Up to 32 tool safety inputs
- Press Force Measurement:
- » Two or four press force channels
- Preset Counter:
- » Up to 32 preset counters
- Analog Measurement (Analog Input):
  - » Up to 32 cam outputs
- Peripheral Inputs (Digital Inputs):
- » Up to 64 inputs

## SYS





# **SPECIFICATIONS & DESIGN**

Fixed Stroke, Knuckle Link Motion		<b>SYS</b> ANEX 30 II H -600	<b>SYS</b> ANEX 40 II H -750	<b>SYS</b> ANEX 40 II W -950	<b>SYS</b> ANEX 40EW -1100 <sup>3</sup>	<b>SYS</b> ANEX 60 II H -1100-1200	
Press Force	kN	300	400	400	400	600	
Tool Loading Area (L-R)	mm	600	750	950	1,100	1,100 or 1,200	
Adjustable Stroke <sup>A</sup>	mm	5[1]/14/16/2/25/32	10[1]/16/20/25/30/32/36[1]	20/25/32/40/50 <sup>[1]</sup>	12[1]/20/25/32/40	10 <sup>(1)</sup> /20/25/32/50 <sup>(1)</sup> /64 <sup>(1</sup>	
Strokes Per Minute	SPM	200	180	180	100	200	
Strokes Per Minute (stroke length dependent)	SPM	1600/1500/1400/1350/1150/1000	TBD <sup>[2]</sup> /1200/1100/1000/950/950/TBD <sup>[2]</sup>	850/850/800/700/550	1100/1000/950/850/750	1000/800/800/700/TBD <sup>[2]</sup> /TBD <sup>[2]</sup>	
Main Voltage (EN60204) <sup>a</sup>	V	400	400	400	400	400	
Main Frequency (EN60204) <sup>a</sup>	Hz	50/60	50/60	50/60	50/60	50/60	
Connected Load (max.)	kVA	76	76	76	76	76	
Control Voltage	VDC	24	24	24	24	24	
Water Cooled AC Servo Main Motor	kW	47	47	47	47	47	
Compressed Air Connection R 1/2" - 3/4"	bar	5.9-7.9	5.9-7.9	5.9-7.9	5.9-7.9	5.9-7.9	
Slide Adjustment Range	mm	40	50/50/50/50/50/45	50/50/45/35	50	80	
Shutheight (Standard) <sup>A,D</sup>	mm	240	240/240/240/240/240/235	240/240/240/235/225	300	300	
Bolster Area (L-R x F-B x H)	mm	600 x 400 x 90	750 x 500 x 120	950 x 600 x 120	1,100 x 600 x 130	1,100-1,200 x 600 x 140	
Bolster Plate Opening (L-R, F-B)	mm	350 x 60	500 x 100	700 x 100	TBD	780 x 80	
Base Plate Opening (L-R, F-B)	mm	400 x 100	560 x 120	790 x 120	910 x 120	840-920 x 120	
Bridge at Bed Opening	Yes/No	No	No	No	No	No	
Slide Area (L-R, F-B)	mm	600 x 300	750 x 340	950 x 450	1,100 x 450	1,030-1,130 x 500	
Max. Upper Die Weight <sup>e</sup>	kg	80	155	155-180	180	250-450	
Recommendation Upper Die Weight	kg	56	109	109-126	126	175-315	
Strip Inlet Height from Bolster	mm	70-110	100-140	100-140	90-150	100-140	
Strip Inlet Width (Machine)	mm	160	200	200	200	230	
DIMENSION							
Press Dimensions (L-R, F-B)	mm	1,780(2,200) <sup>[4]</sup> x 1,315	1,850 x 1,300	2,050 x 1,330	2,630 x 1,520	2,630 x 1,595	
Height	mm	3,075(2,760) <sup>[4]</sup>	3,180	3185	3,245	3,052	
Weight	kg	6,500	8,000	9,500	11,000	14,000	

- B. 15T-40T: 1/2"; 60T-150T: 3/4"
- C. Shutheight and adjustment is dependent upon stroke length
- D. Thickness is dependent on shutheight request
- E. Dependent on stroke and speed requirement
- F. Without control cabinet, oil cooler and peripheral equipment
- 1. Max. speed at shortest stroke is TBD
- 2. Please contact your sales represenative
  - Slide is light weight version with aluminum sub plate
- 4. ( ) dimension is main motor mounted on the side of press as an option

SPECIF	CATIONS	& DESIGN
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Fixed Stroke, Knuckle Link Motion		<b>SYS</b> ANEX 60 II W -1350	<b>SYS</b> ANEX 80 II -1200	<b>SYS</b> ANEX 80 II W -1500	<b>SYS</b> ANEX 125 -1600	SYS
Press Force	kN	600	800	800	1,250	
Tool Loading Area (L-R)	mm	1,350	1,200	1,500	1,600	
Adjustable Stroke <sup>A</sup>	mm	25/32/40/45/50/60[1]	20/25/32/36/45 <sup>[1]</sup> /50 <sup>[1]</sup>	25/32/461)/60 <sup>[1]</sup>	25/36/50 <sup>[1]</sup> /60 <sup>[1]</sup>	
Strokes Per Minute	SPM	100	120	120	100	
Strokes Per Minute (stroke length dependent)	SPM	700/600/450/400/350/TBD <sup>[2]</sup>	700/600/550/500/400/400	500/450/400/350	400/350/250/250	
Main Voltage (EN60204) <sup>▲</sup>	۷	400	400	400	400	
Main Frequency (EN60204) <sup>A</sup>	Hz	50/60	50/60	50/60	50/60	
Connected Load (max.)	kVA	76	76	76	TBD	
Control Voltage	VDC	24	24	24	24	
Water Cooled AC Servo Main Motor	kW	47	47	47	84	
Compressed Air Connection R 1/2" - 3/4"	bar	5.9-7.9	5.9-7.9	5.9-7.9	5.9-7.9	
Slide Adjustment Range	mm	80/80/75/65/60/50	80/80/80/80/70/65	80/80/70/55	80/80/60/55	
Shutheight (Standard) <sup>A,D</sup>	mm	340/340/335/325/320/320	320/320/320/320/310/305	320/320/310/295	350/350/330/330	
Bolster Area (L-R x F-B x H)	mm	1,350 x 600 x 140	1,200 x 800 x 160	1,500 x 800 x 160	1,600 x 900 x 180	
Bolster Plate Opening (L-R, F-B)	mm	1,000 x 80	860 x 120	1,160 x 120	1,260 x 160	
Base Plate Opening (L-R, F-B)	mm	1,050 x 120	900 x 160	1,200 x 160	1,300 x 160	
Bridge at Bed Opening	Yes/No	Nein	Nein	Ja	Ja	
Slide Area (L-R, F-B)	mm	1,280 x 500	1,080 x 580	1,380 x 580	1,480 x 600	
Max. Upper Die Weight <sup>E</sup>	kg	400-500	500	500	600	
Recommendation Upper Die Weight	kg	280-350	350	350	420	
Strip Inlet Height from Bolster	mm	100-140	100-140	100-140	100-140	
Strip Inlet Width (Machine)	mm	230	280	280	360	
DIMENSION						
Press Dimensions (L-R, F-B)	mm	3,090 x 1,490	3,000 x 1,555	3,280 x 1,560	3,520 x 1,730	
Height	mm	3,170	3,380	3,380	4,070	
Weight	kg	16,000	19,000	22,000	33,000	
High Precision Servo Feed Unit	standard	PV-30-300	PV-30-300	PV-30-300	PV-100-300	

- ANEX 150 -1600 1,500 1,600 20/25/36/50 100 400/400/300/250 400 50/60 TBD 24 84 5.9-7.9 80/80/80/60 350/350/350/330 1,600 x 900 x 180 1,260 x 120 1,300 x 160 Ja 1,480 x 600 900 630 100-140 360 3,520 x 1,730 4,185 36,000 PV-100-450
- A. Options on request
- B. 15T-40T: 1/2"; 60T-150T: 3/4"
- C. Shutheight and adjustment is dependent upon stroke length
- D. Thickness is dependent on shutheight request
- E. Dependent on stroke and speed requirement
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## **KYORI**



## 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 pressroom 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

### METALFORMING 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 11



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