KYORI

A NIDEC PRESS & AUTOMATION CO.

VX

VARIABLE STROKE HIGH PERFORMANCE PRESSES

400-1250 kN
40–125 Metric Tons

EQUIPPED WITH SYS TECHNOLOGY

KYORI

PRODUCT OVERVIEW

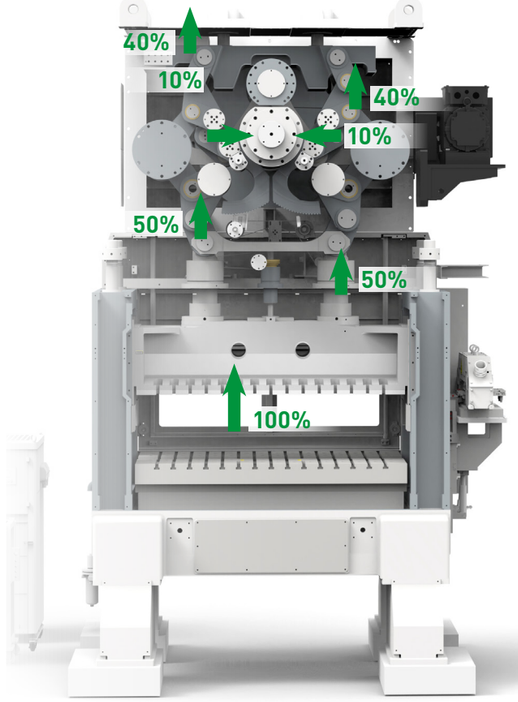
Kyori link motion presses are known around the world for their high performance, pinpoint precision and ease of operation. The Kyori VX series presses are among the industry's most powerful link motion presses, and its fine-tuned features can provide your facility with increased productivity, longer tool life and high efficiency without sacrificing quality.

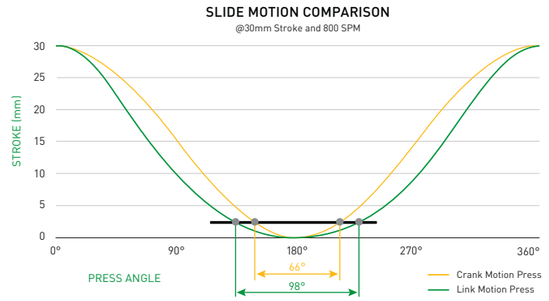
1. Highly dynamic, link motion adjustable stroke design
2. Modern, high-performance press control in modular design
3. Highly efficient drive technology ensuring lower Co2 footprint
4. Stroke adjustment doesn't change the shutheight
5. Bottom-dead-center position and crank angle position will not be changed
6. Customized customer solutions with standard components
7. Industry 4.0 capable via OPC-UA interface

ADVANTAGES OF VX MODELS

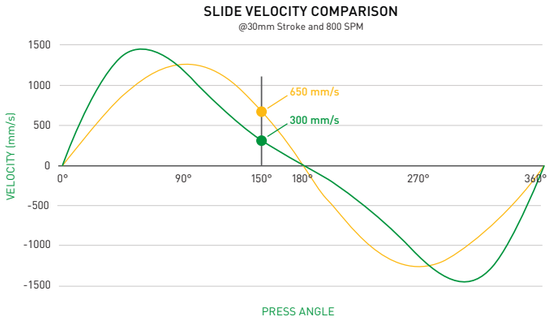
Robust Mechanical Design

- Kyori link motion design:
  - Creating a slower slide movement through bottom-dead-center
  - Particularly advantageous for forming operations / optimum part quality
- 8-point needle roller bearing, installed in long guideways to prevent the ram from tilting under off-center loads
- Optimal flexibility because of adjustability of variable stroke mechanism, which is fully automatic and completed in 90 seconds
- Option for higher upper die weight

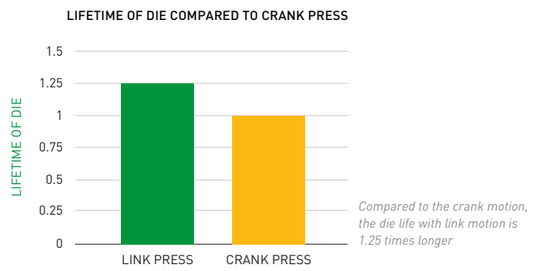




Compared to the crank motion, the link motion keeps the slide on the bottom of the stroke approx. 1.5 times longer



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



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

NIDEC SYS CONTROL

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

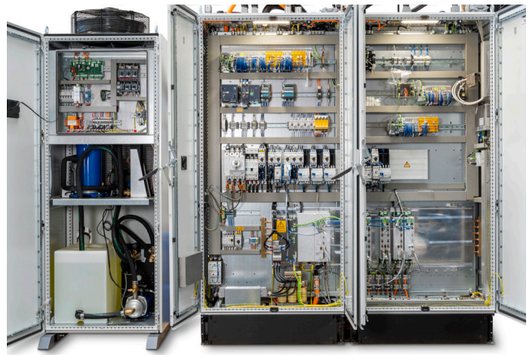
- 1st stage: Reduction of the main drive to the number of strokes
- 2nd stage: Reduction of the main drive to speed 0 (standstill)
- 3rd stage: Oil pump and air valve shutdown

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

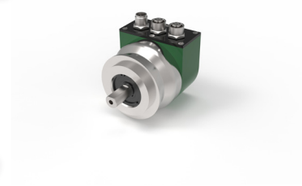
Additional Options

- 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



SPECIFICATIONS & DESIGN

		SYS VX-40-750	SYS VX-50-1100	SYS VX-50-1500	SYS VX-80-1500	SYS VX-125-2200
Press Force	kN	400	500	500	800	1250
Tool Loading Area (L-R)	mm	750 x 500	1100	1500	1500	2200 x 600
Adjustable Stroke	mm	15/20/25/30/35/40	16/19/25/32/38/44/51/57/64	16/19/25/32/38/44/51/57/64	25/30/35/40/50/60/75	16/19/26/35/43/51/58/64/70/75
Speed (Minimum)	SPM	80	100	100	120	80
Speed - Ceranx Slide (Maximum)	SPM	1200/1000/900/800/700/650	1100/1000/880/780/700/600/500 /450/400	1150/1080/950/830/730/650/550 /480/420	650/550/470/400/330/270/150	860/800/670/540/460/385/340/310 /280/260
Main Voltage (EN60204)	V	400	400	400	400	400
Main Frequency	Hz	50/60	50/60	50/60	50/60	50/60
Connected Load	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	80
Compressed Air Connection: R 1/2"-3/4"	bar	5,9 (7,9 max.)	5,9 (7,9 max.)	5,9 (7,9 max.)	5,9 (7,9 max.)	TBD
Slide Adjustment Range	mm	50	55	55	80	75
Shutheight (Standard)	mm	-	300	300	380	-
Bolster Area (L-R x F-B x height)	mm	750 x 500 x 130	1100 x 600 x 210	1500 x 600 x 210	1500 x 900 x 150	2200 x 1050 x 150
Bolster Plate Opening (L-R x F-B)	mm	As per customer drawing	1100 x 110 (split type)	1500 x 110 (split type)	1160 x 150	-
Base Plate Opening (L-R x F-B)	mm	560 x 120	800 x 160	1200 x 160	1200 x 250	2000 x 350
Bridge at Bed Opening	yes/no	yes	no	no	yes	yes
Slide Area (L-R x F-B)	mm	750 x 480	1100 x 420	1400 x 420	1380 x 580	2000 x 600
Max. Upper Die Weight	kg	TBD	220	300	450-550	1300
Strip Inlet Height from Bolster	mm	100	100 (max. 140)	100 (max. 140)	100 (max. 140)	100 (max. 140)
Strip Inlet Width (Machine)	mm	300	280	280	440	500
Press Dimensions (L-R x F-B)	mm	2120 x 1400	2155 x 1543	2311 x 1835	2850 x 1825	3050 x 2144
Press Height	mm	3170	3780	3780	4070	4349
Press Weight	kg ca.	9500	12.500	14.500	27.000	46.000
High Precision Servo Feed Unit		PV30-100	PV30-200	PV30-200	PV60-300	PV100-450

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