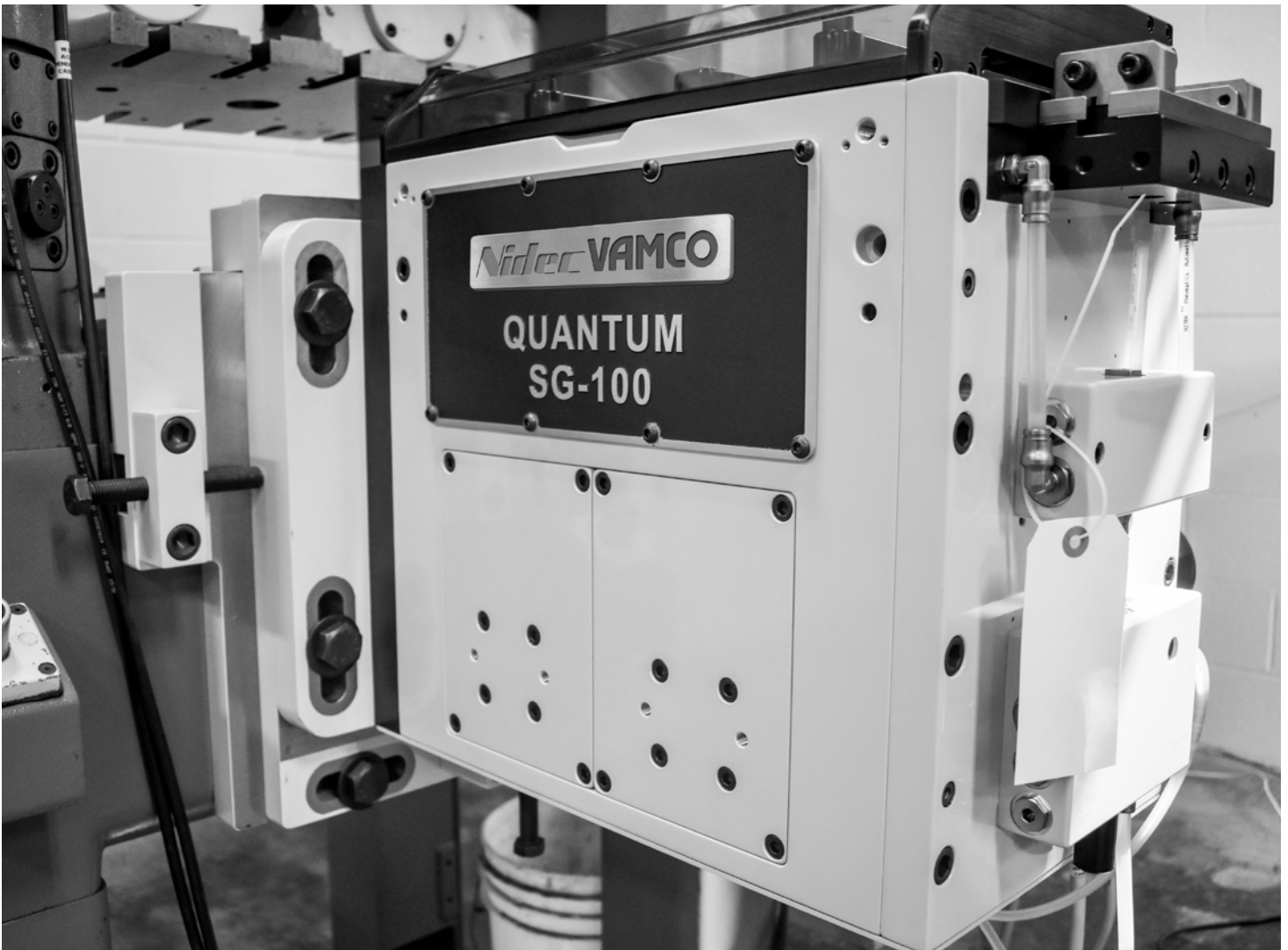


SG

Quantum SG Series

High-Speed Electronic Gripper Feed



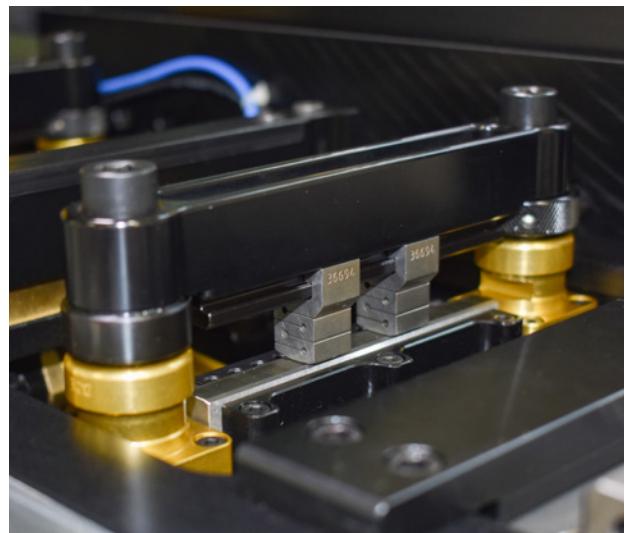
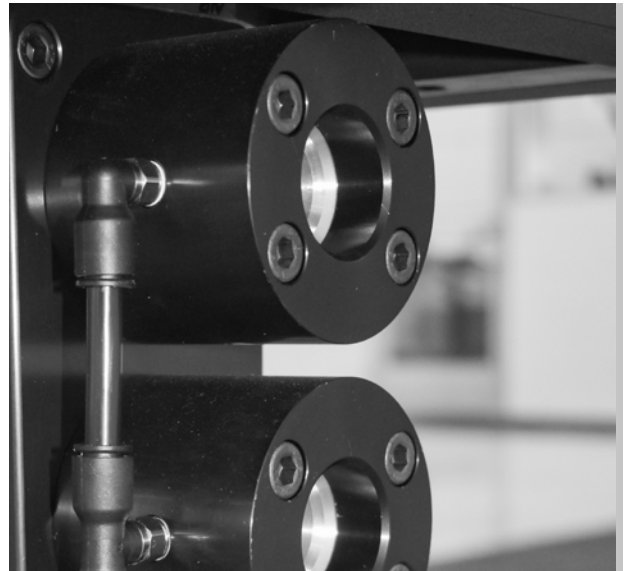
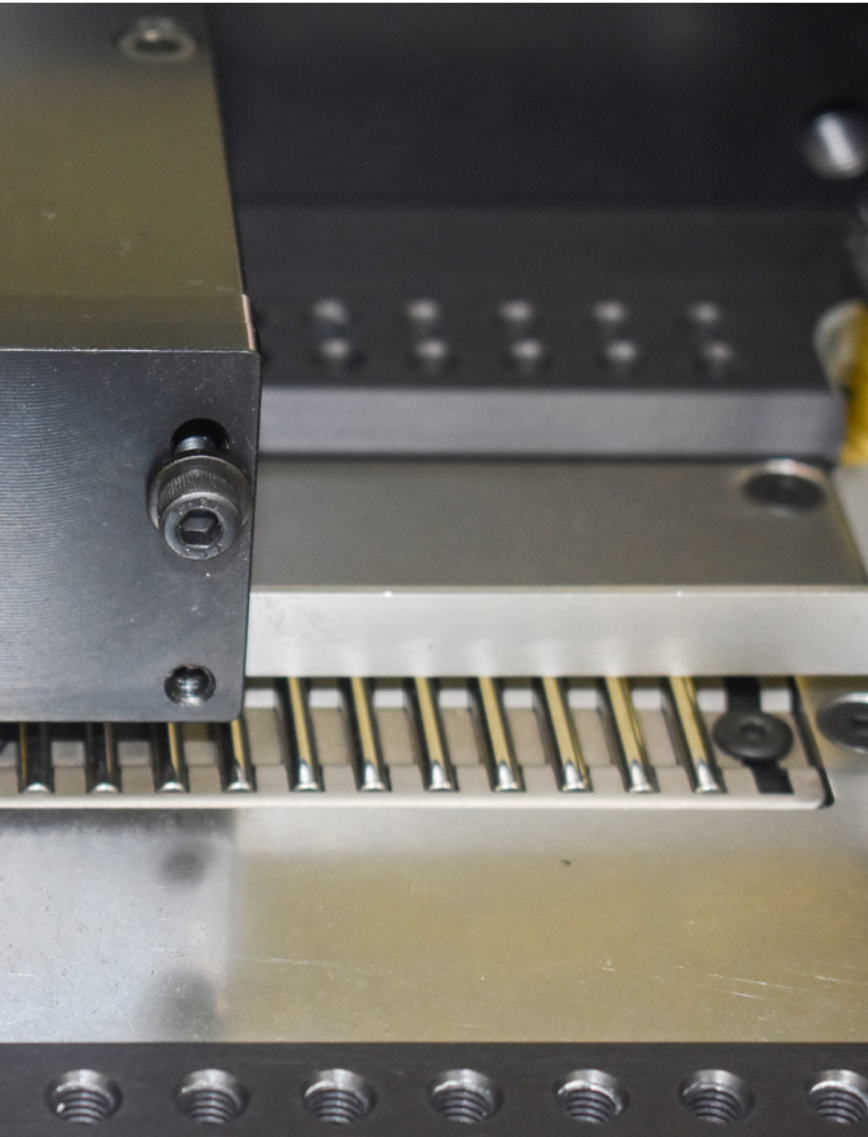
Product Overview

The Quantum SG Series is the latest revolutionary development in high-speed feeding technology offering full electronic adjustability in a gripper feed. Each axis of the SG Series simulates the motion of a cam driven device but without their fixed limitations.

Advantages over traditional mechanical cam driven devices are:

- Full electronic adjustability
- Variable feed & release timing to press
- Variable feed length capability
- Tool manager & part database
- Electronic camming
- Tightly coordinated multi-axis motion control
- Advanced & remote diagnostic capability
- Sealed recirculating oil lubrication system
- No mechanical cams
- No material thickness adjustment
- No dials to change feed settings
- No mechanical drive linkage to the crankshaft



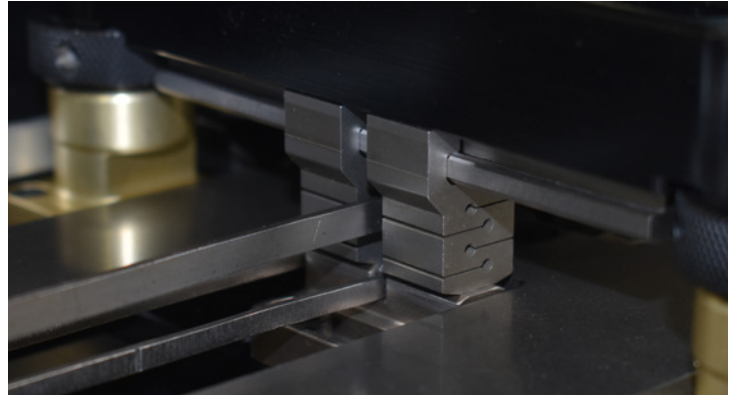


Standard Features

Modular Gripping Mechanism

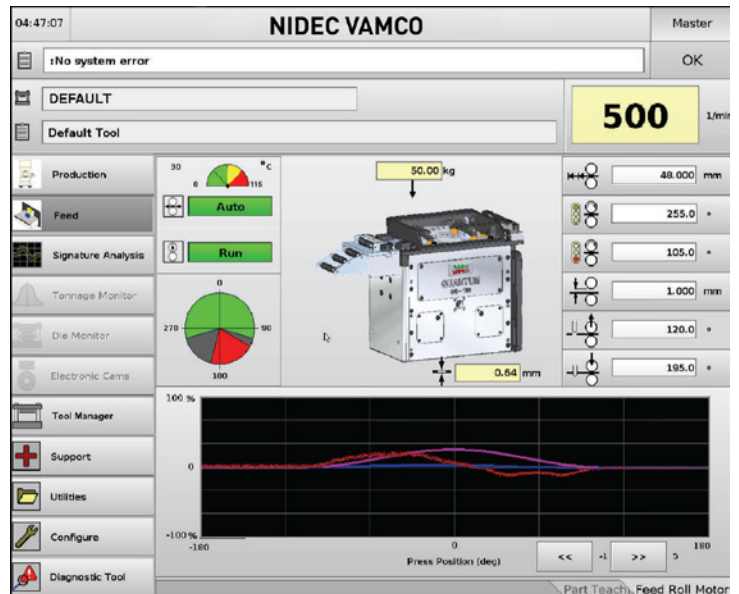
The modular gripper pads of the SG Series evenly exert pressure on stock materials to eliminate deformation on delicate or plated materials such as:

- Electrical connectors & contact parts
- Lead frames
- Thin motor core laminations



HMI Intelligence

- 430mm touchscreen display
- Press & feed timing diagram
- Motor temperature display
- Press interlock status
- Real time feeding signatures
- On-screen help
- USB support



Programmable Database

- Feed length and angle
- Material thickness
- Pilot release angle and distance
- Clamp timing
- Grip pressure
- Multi-progression programming
- Create, edit and load parts

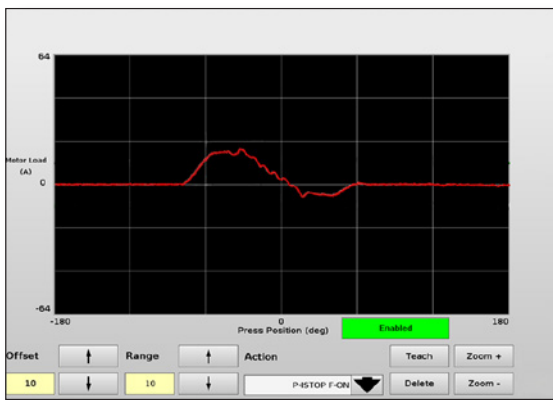
I/O Interface

- Selectable Inputs:
 - End of stock
 - Buckle detection
 - In-position
- User Defined Inputs:
 - Programmable Actions
 - Warning
 - Top Stop
 - Immediate Stop
 - Die Jam Correction
- Outputs:
 - Press position based
 - Feed progression based
 - Multi-progression (Gagged tooling)



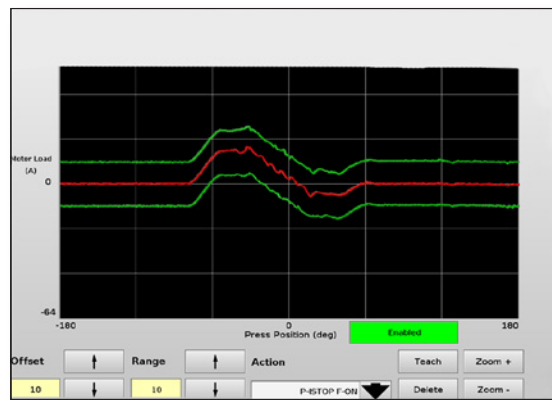
Standard Features

Diagnostics and Tool Protection



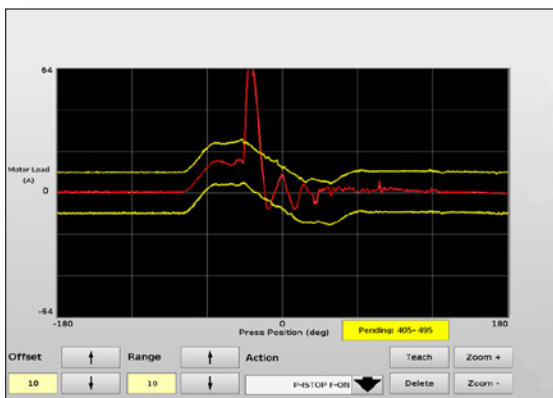
Digital Oscilloscope

Motor torque and velocity information is displayed in real-time for each advance of the stock material.



Signature Analysis

Generate user defined tolerance bands around a good feeding signature through an automated teaching process.



Die Jam Detection

Tolerance band violations indicate feeding obstructions within the tool.



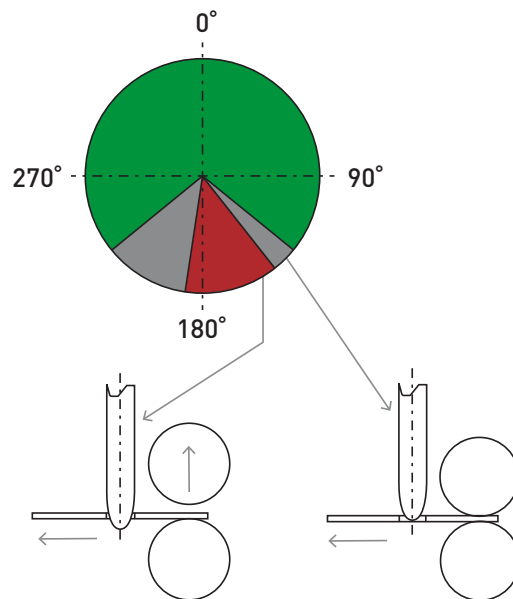
Die Jam Correction

Reverse the stock material to a safe position while commanding a controlled press stop to prevent tool damage caused by partial feed lengths during a tool strike.

Automatic Pilot Timing Set-Up

Eliminate wasted time and increase tool life by allowing the Quantum ACS to determine and set its own pilot release timing through three simple steps:

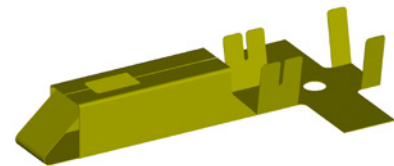
1. Jog the stock material one complete feed length
2. Single stroke the press
3. Confirm the calculated value on the HMI and save in the part database



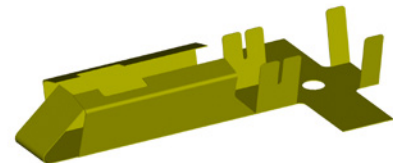
Press Shut Height Variation Compensation (PSHVC)

Eliminate improperly formed parts resulting from press slide penetration depth variation with changes in press speed. Simply program a minimum speed for press feeding and the Quantum ACS will only feed the stock material while the press is operating at a desirable slide speed.

Good part made with PSHVC

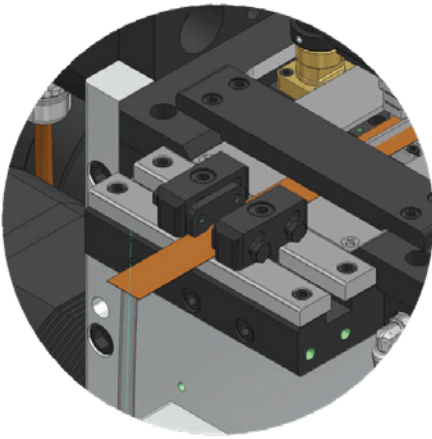


Bad part made without PSHVC

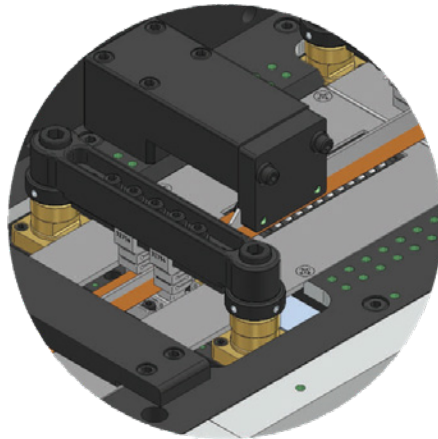


Configurations

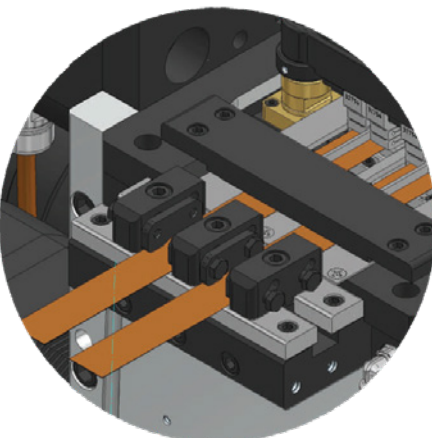
Single Strip



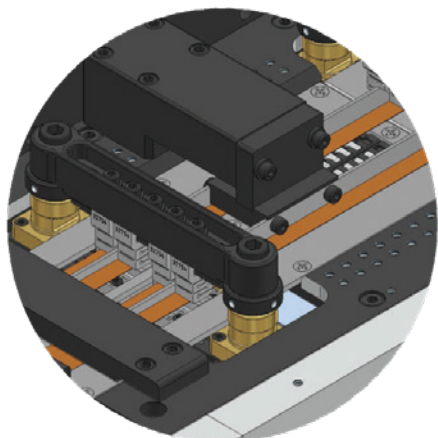
Single Strip Stock Guide



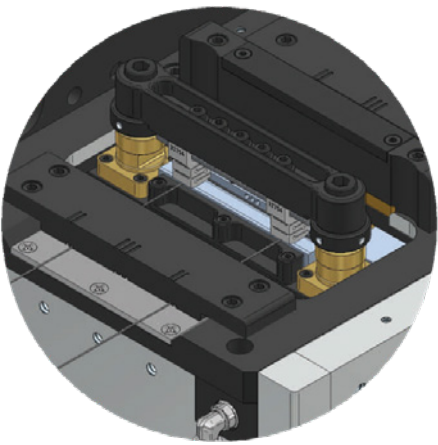
Multiple Strips



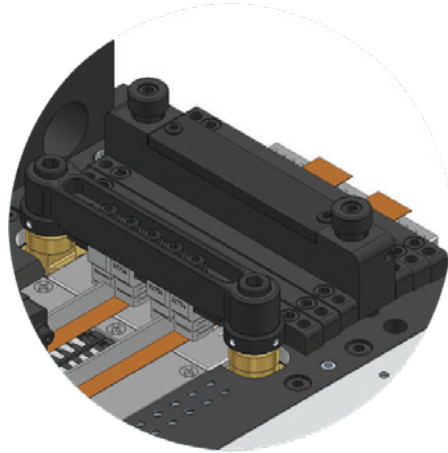
Multi-Strip Stock Guide



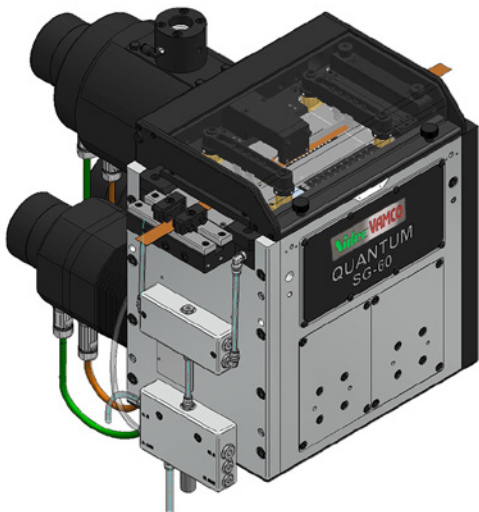
Wire



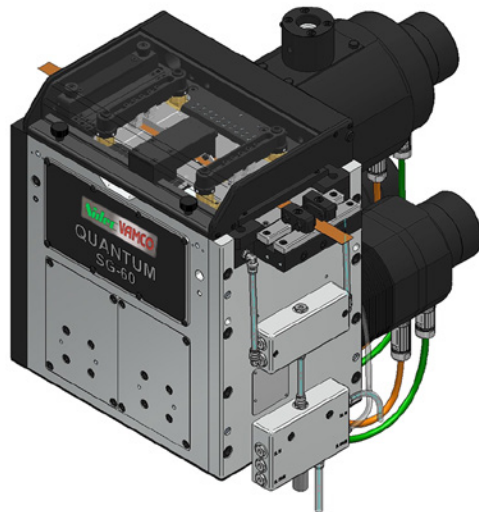
Buckle Detector



Left Hand Feed



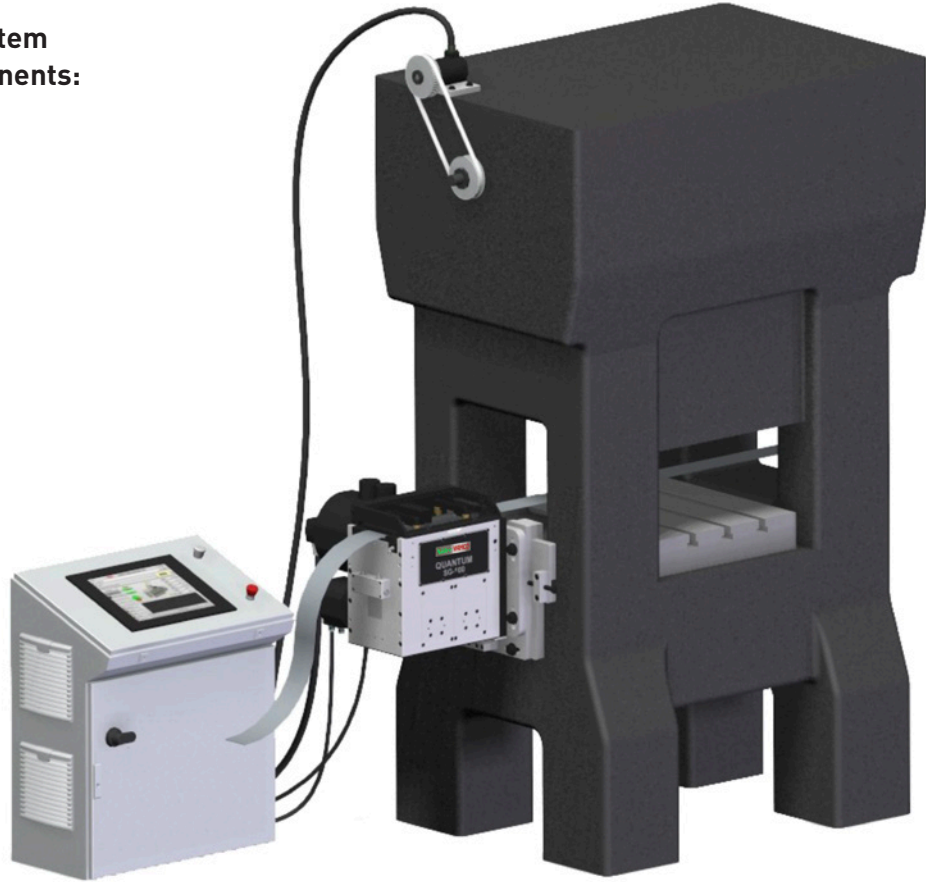
Right Hand Feed



Specifications

The Quantum SG Feeding System consists of three main components:

1. Servo Feed Mechanism
2. Electronic Control Console
3. Press Mounted Resolver



FEED MODEL	FEED LENGTH	FEED ANGLE	MATERIAL THICKNESS	MATERIAL WIDTH (MAX)	GRIP FORCE	SPEED (MAX)
SG-60-S-110	0 ~ 60 mm	0 ~ 240°	0 ~ 4 mm	110 mm	250 ~ 1000 N	1750
SG-100-S-110	0 ~ 100 mm	0 ~ 240°	0 ~ 4 mm	110 mm	250 ~ 1000 N	1750



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