Machinery Specifications- KFS-1420E

Overview

The KFS-1420E FRAMEMAKER® showcases Knudson's multi-profile/multi-thickness capabilities in a structural stud and track former. Our flagship model, the KFS-1420E forms C-Channel (stud) and U-Channel (track) light-gauge steel framing profiles for commercial and residential wall, floor, and truss construction.

Profile Specifications

KFS-1420E forms the following stud/track profiles:

- Stud/Track Web Sizes: 3.63, 4.00, 6.00, 8.00, 10.00, 12.00-in
- Stud Flange Sizes: 1.63, 2.00, 2.50-in
- Track Flange Sizes: 0.75-in (min) to 2.50-in (max)
- Oversized (standard) Track Profiles
- Profile Depth (max): 2.50-in
- Mechanical Change-Over – profile size and material thickness

Material Specifications

The KFS-1420E can successfully form the following materials.

- Material Thickness: 0.033 to 0.075-in (20 to 14 Ga)
- Material Strength: Grade 50 – up to 65-ksi Yield Strength
- Material Finish: Galvanized (up to G120), Painted, Bare
- Strip Width (min): 2.00 in
- Strip Width (max): 17.00 in

Production Rates

Production Speeds:

- Running Line Speed: 120 feet per minute (max)
- Average Stud Production Rate (Actual Throughput): 50-ft/min
- Average Track Production Rate (Actual Throughput): 35-ft/min

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Mechanical Specifications

Overall Dimensions

- Length: 192 in (16 ft)
- Width: 42.00 in
- Height: 66.00 in (including safety covers)
- Weight: 4,600 lbs

Roll-Forming Specifications

Roll Forming Details:

- 10 roll forming stations
- 1 Adjustment Stations
- 1 Pull-Out Station
- Exit-End Cut-Off
- Pass Line Height: 41.00 in
- Stop-to-Cut System

In-Line Tool Specifications

The KFS-1420E may be customized with a selection of in-line punch tools:

- A library of over 40 punched feature configurations
- Standard and Custom features available

Electrical Specifications

Electrical Options:

- 460 VAC / 60 Hz / 3 Ph – 48 Amps Full System Load
- 230 VAC / 60 Hz / 3 Ph – 97 Amps Full System Load

Control Systems Specifications

Control System Options:

- Beck Automation SII Multi-Press Controller
- Stop-to-Cut/Punch Control Type
- Servo-Feed, Closed Loop Control

Drive System Specifications

Drive Specifications:

- Running Line Speed: 120 feet per minute (max)
- 11 KW Servo Motor Drive
- Sprocket and Roller Chain Power Transfer – Power Take-Off and Station-to-Station
- Spur Gear Power Transfer – Bottom to Top

Hydraulic Power System Specifications

Hydraulic Power Specifications (punch tool operation/actuation):

- 7.5 HP Electric Motor
- Axial Piston Variable Displacement Pump (Pressure Compensated System)
- 5.5 GPM @ 2,000-psi
- 4-Way, 2-Position Valves for Tool Actuation

Environmental Specifications

Ambient Air Temperature

- +41° to +131° Fahrenheit (+5° to +55° Celsius)
- Up to 24 hours at 122° Fahrenheit (50° Celsius)

Humidity Range

- No Restrictions

Altitude Range

- No Restrictions

Vibration Shock and Bump

- Minimal vehicular transport on maintained roads
- Off-road transportation not recommended

Transportation and Storage

- –13° to +131° Fahrenheit (–25° to +55° Celsius)
- Up to 24 hours at +158° Fahrenheit (+70° Celsius)

Explosive Atmosphere

- Should not be operated in any kind of explosive atmosphere

Airborne Noise Emissions

- Equivalent continuous A-weighted sound pressure level—less than 70 dB (A)

Fluid Specifications

The factory recommends use of the following fluids:

*(see **General Information > Fluids and Lubricants** for detailed specifications)*

- Hydraulic Oil – ISO 46 Oil
- Coolant – Water Soluble Oil EP CF
- Blade/Punch Lubricant – Edge Cutting Lubricant for Metals
- Shaft Lube – Mobile Synthetic Lubricating All-Purpose Grease

Options

Material Handling

- Dead-Roller Conveyor Tables for Material Discharge

Coil Handling

- Motorized Stock Reels (Uncoilers/Decoilers) for Coil Feed
- Powered Material Straighteners/Levelers for Coil Straightness

Software

- Connex™ Web-Based Enterprise Software
    - Network Connection to Machinery
    - Production Planning and Job Programming/Scheduling
    - Inventory Management and Production Reporting
- CAD/Building Design Software Compatibility
    - Strucsoft Solutions – MWF Pro Metal
    - Vertex Systems - Vertex BD
    - Arktec – TriCalc