

## Silicone Extrusion Systems

### Overview

Your industrial and medical silicone tubing applications demand production reliability, product consistency, operational efficiency and rigorous operational safety designs. Davis-Standard's silicone extruders and extrusion systems are up to the task. Built to support growing markets, our silicone extruders and extrusion systems are available in multiple sizes and configurations to address your applications and production requirements. Extruders are engineered to your specifications and supported by our customer-centric approach to project management and 24/7 customer service. This includes access to a trusted network of vendors to supply complete vertical and horizontal silicone curing lines, as well as auxiliary options such as in-line cutting, laser etching, printing, coiling and take-away machinery.

### Features

We offer several advantages to ensure your investment is equipped for daily processing demands:

- Multiple control options from basic to full line controls
- Expertise in applications ranging from bio-pharma to medical grade tubing markets
- Singular point of contact for the entire system, extruder thru downstream machinery
- Experience with cleanroom requirements
- Dedicated field service department for installation and start-up
- 24/7 aftermarket service and support
- Diverse application capabilities: medical silicone catheters, wound drainage tubing, specialized tubing, multi-lumen tubing, radio-opaque stripe, farm/dairy silicone tubing and multi-layer hose, industrial silicone tubing, specialty silicone gaskets
- Safe designs - Strict adherence to all safety guidelines and norms

# Silicone Extrusion Systems

## Robust Engineering

Our robust silicone extruder design reflects your competitive production demands. Here are a few reasons Davis-Standard silicone extruders excel in the field.

## Vertical and Horizontal water-cooled heads

- Low pressure/low inventory flow channel design
- Vertical mount for ease of line threading, alignment and superior ergonomics
- Precision concentricity adjustment with repeatable alignment design
- High-flow cooling channels with optimized cooling distribution and consistent cooling coverage for precision concentricity control
- Unique air and vacuum inner tube support with proven sealing systems

## Closed-Loop, Variable Speed Roll Feed System (Standard)

- Automatic feed roll regulation with minimal operator involvement
- Pneumatic feed roll rate regulation by torque-sensing clutch driven from the main thrust shaft
- Uniform, consistent feed rate that automatically compensates for feed strip size variations

## Closed-Loop, Precision Servo Driven Roll Feed System (Optional)

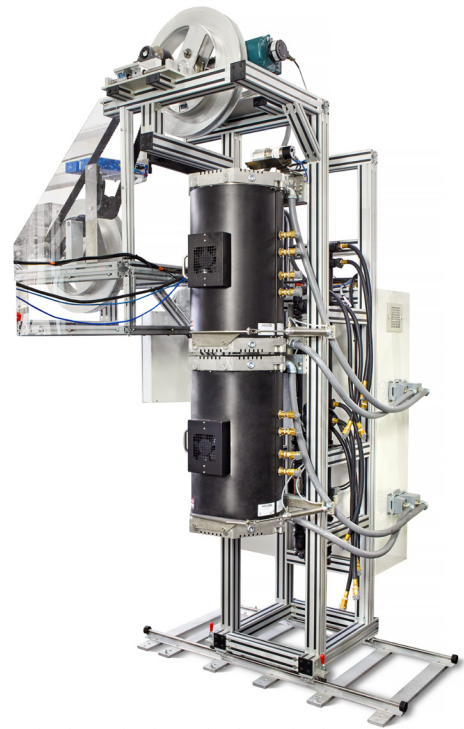
- Precision control of “rolling feed bank” of compound, regardless of linear volume feed stock conditions and variability
- Exact bank control for low durometer compounds difficult to feed on conventional roll feeders
- Elimination of contaminants for cleanroom environments
- Unique bearing design for minimal maintenance and staining from open bearing designs
- Feed roll scrapper system that prevents staining from carbon steel reactions with various compound formulations

## Superior gearcase design

- Horizontally mounted double-reduction parallel shaft reducer with integral thrust for simplicity and economy
- Leak-free, non-contacting labyrinth oil seals never wear out, eliminating costly oil seal maintenance
- Thrust shaft mounted on preloaded radial bearings to support ideal screw-to-barrel alignment

## Line Specifications

<b>Line speed range:</b>	1.5 to 23 mpm/5 to 125 fpm
<b>Extrudate Size range (typical):</b>	2.5 to 50mm/100mm to 2 inches
<b>Materials:</b>	Medical and industrial grade silicone compounds, heavily-filled formulations, and conductive silicone compounds.



## Wear-resistant extruder barrel

- Iron/boron bimetallic liner cast into a 4140 steel barrel assembly (harder alloys available)
- Integral liner/jacket construction provides maximum heat transfer for multiple zones
- Engineering to withstand operator pressure up to 10,000 psi

## Hinged head support

- Mounting available from the left, right or on both sides
- Designed for rapid heat closure and alignment
- Adjustable and may be swung to the side of the machine for preheating, cleaning and tool changes

## Head clamp uniformity

- Double swing bolts for uniform, symmetrical clamping by drawing the tapered flanges with the breaker plate for positive sealing and extrusion head alignment

