SALE INFORMATION

Davis Model DSR-3.5" Silicon Rubber Extruder

- 10:1 L/D, Cold Feed, Water Cooling
- Guill Model GTN525BF Crosshead
- Additional Crosshead and Tooling
- (2) Screws Available, Single Flight, Double Flight

- **Silicon Curing IR Tower for up to 3" Capacity**
- 76" Heated Length
- 15' Approx. Overall Tower Height
- 2-Zone, 25" Dia. Capstan, 0 to 125 FPM Capstan Speed

- System purchased New 2021 at cost of almost $450,000
- Line was set up, test run and put into storage
- Currently located in storage on the East Coast

- ***Attached is documentation obtained from original purchase***

- **Asking Price: $225,000 + 18% Buyers Premium**

For question please contact: Jeff Luggen, Jeffjr@cia-industrial.com

Glenro Vertical Radround Infrared Preheat Oven available for purchase separately.

"We hereby offer for a limited period of 30 days following the date hereof the items described below and/or in the specifications, if any, consisting of the pages attached hereto. **This offer is subject to the terms and conditions contained herein and attached hereto and in the specifications, if any, and to no others whatsoever. We object to any additional or different terms."**

Equipment summary – vertical extrusion

ITEM	QTY	DESCRIPTION
1.0	1	Davis-Standard Model DSR 3.5" Silicone Rubber Extruder with 10.5:1 L/D ratio barrel, cold feed, water cooling, drive and discrete control panel (Right Hand operation)
2.0	1	Guill Crosshead GTN525BF
3.0	1	Davis-Standard Silicone Curing IR Tower For tubing up to 3.00" Outer Diameter
4.0	1	System Engineering/ Dry Test
5.0	1	Start-up and Commissioning

SYSTEM PRICE……$ 415.237.00

NOTE- ABOVE PRICE INCLUDES THE 4 % DISCOUNT AS AGREED.

OPTIONS

1a	Screw Pusher 3-1/2 extruder…….$	1,600.00
1b	Screw Pusher 2-1/2 extruder (Ref 2171125)…….$	1,510.00
3a	Pyrometer – Product Temp Sensor……$	11,050.00
3b	Ladder for Cure Tower…….$	20,850.00

ITEM 1: DSR® 3-1/2" 10.5:1 L/D SILICONE EXTRUDER

1. **Davis-Standard Model DSR 3.5" *(90 mm)* Multipurpose Rubber Extruder with 10:1 L/D ratio barrel, cold feed, water-cooling. The following features and accessories are included:**
   - **A. Direction of operation is from right to left, RH feed (unless otherwise specified).**
   - **B. Extruder and motor paint color is D-S Blue (PT10000021), Black barrel hoods (PT1000003) and Gray cabinets and enclosure (PT100033), Black faceplate. Paint Extruder panel same D-S Blue.**
   - **C. Common base configured to provide 38" (To be confirmed prior to start of project) *(965 mm)* extruder centerline height, when bolted to floor. All components are mounted, piped, wired, and tested prior to shipment for ease of installation and to reduce floor space.**
   - **D. Double reduction gearbox with crown shaved, helical gears, and integral high capacity thrust bearing.**
     - 24.73:1 reduction ratio, with a torque rating of 2.57 HP/RPM with a 1.5 service factor.
     - Thrust bearing B-10 life of 421,250 hours at 5,000 PSI and 100 RPM
     - Set of belt and sheaves with belt guard timed for 60 RPM max. screw speed.
     - Splash-lube system.
   - **E. 40 HP *(30 KW)* AC Extruder Drive wired for line voltage including:**
     - 40 HP *(30 KW)* AC motor, 1800 RPM, totally enclosed fan-cooled, continuously rated, with thermoguard, motor mounted encoder (mounted on extruder base, vertical adjustment, and completely wired).
     - 40 HP (*30 KW*) AC drive control with 0.01% speed regulation, 100:1 speed range, mounted in control cabinet.
   - **F. Davis Standard patented pneumatic pressure roller feeder mechanism, operates through an adjustable torque clutch, driven from the extruder screw thrust shaft.**
     - Provides uniform, consistent feed rate.
     - Automatically compensates for feed strip size variation.
     - Feed roller equipped with recessed bearings.
     - Nylon scraper blade
     - 7.25" (184 mm) wide feed opening
     - Chrome plated feed section and feed roll for silicone applications
     - Emergency stop pushbutton located at the feed area.
   - **G. 10:1 L/D Non-vented Barrel.**
     - Bimetallic lined X102 or equivalent.
     - Large hole breaker plate and spacer ring, 17-4 PH Stainless.
     - Pressure transducer mounted before breaker plate, 10,000 psi (685 bar) range unless otherwise specified.
     - Two (2) zones of cooling.
       - ➢ Deep well thermocouple taps, complete with thermocouples and adapters.
       - ➢ Water-cooled, double-pass cast aluminum heater coolers.
     - Screw cooling assembly, including rotary union and flex hoses.
   - **H. Davis Standard 10:1 L/D ratio feed screw.**
     - Alloy steel construction.
     - Cored for cooling.
     - Flame hardened flight lands
     - Chrome plated

- Spare screw included.

I. Front support cradles cylinder barrel to maintain rigid alignment and resist barrel deflection caused by heavy die heads.

- Single swing bolt head clamp assembly for uniform symmetrical clamping.
- Hinge assembly for supporting extrusion heads. Adjustable for proper alignment and may be swung completely to the side of the machine for preheating, cleaning, and tooling changes.

J. Cooling manifold system mounted on the extruder base, including:

- Flow indicators, thermometers, and isolation valves for each zone (2 barrel, 1 screw, 1 head and 1 Feed Section)
- Flex hose and quick disconnects supplied for screw
- Single inlet and outlet water lines for quick and easy hook-up.
- Chilled water supply *by customer*

K. Operator Control Station (OCS) mounted on front above barrel for easy access, including:

- Screw RPM indicator.
- Motor Load Display.
- 10-turn speed control potentiometer.
- Start/stop pushbutton.
- Pressure indicator for breaker plate.

L. Davis Standard 10.5:1 L/D ratio Silicone feed screw.

- Alloy steel construction.
- Flame hardened and chrome plated
- Cored for cooling.
- Screw cooling assembly, including rotary union and flex hoses.
- Spare screw included.

M. Front support cradles cylinder barrel to maintain rigid alignment and resist barrel deflection caused by heavy die heads.

- Double Swing bolt head clamp assembly for uniform symmetrical clamping.
- Hinge assembly for supporting extrusion heads. Adjustable for proper alignment, and may be swung completely to the side of the machine for preheating, cleaning, and tooling changes.

N. Cooling manifold system mounted on extruder base, including:

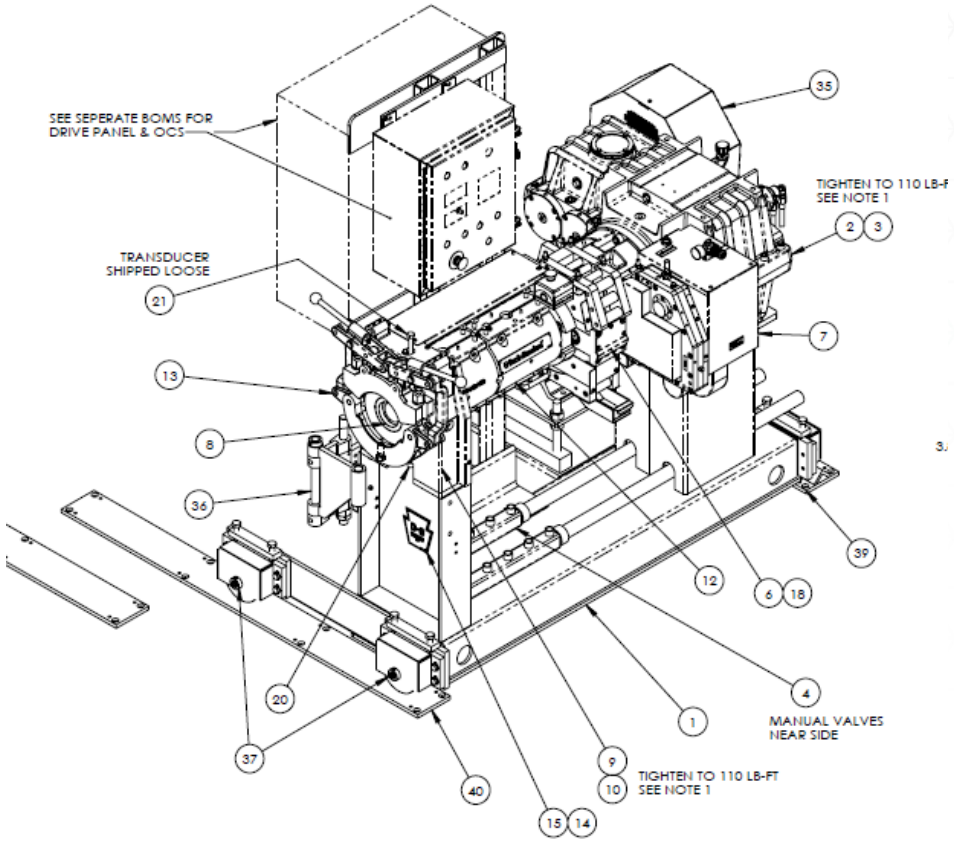
- Flow indicators, thermometers, and isolation valves for each zone (2 barrel, 1 screw, 1 head, 1 feed-section).
- Flex hose and quick disconnects supplied for screw.
- Single inlet and outlet water lines for quick and easy hook-up at rear of extruder.
- Chilled water supply *by customer*.

O. **Operator Control Station (OCS) mounted on front above barrel for easy access, including:**

- Screw RPM indicator.

- Motor load display.
- 10-turn speed control potentiometer.
- Start/stop pushbutton.
- Pressure indicator for breaker plate.
- DS to provide speed ref output from drive to terminal strip for Zumbach guage.

2-1/2" Extruder shown as reference 2171125



ITEM #1a: Screw Pusher 3-1/2" Extruder

- 10 Ton Manual Ram Assembly 321410-1

ITEM #1b: Screw Pusher 2-1/2" Extruder

- For Ref. order 2171125
- 10 Ton Manual Ram Assembly 321409-1

ITEM #2: Guill GTN525BF Adjustable Cross Head Die

Model GTN525BF Die Assembly:

•Capacities: Max of die I.D. of 3.00" (max pass through 2.935")
•Designed as a crosshead assembly
•Designed for your single layer product
•Manufactured from 420 Stainless Steel
•Designed for your silicone process
•Includes flange to mate Davis-Standard extruder

Standard Options:
•Includes a tool kit to aid in assembly and disassembly

ITEM #3: VERTICAL IR CURING TOWER WITH OPTION (right)

- **Structural aluminum** tower to support (2) infrared (IR) heaters mounted vertically with a driven 'U' groove capstan wheel aligned with the heaters. Structure has a clear anodized finish.
- Each heater will have separate controls with 0-100% adjustment range. IR heaters are protected with a sensor to monitor water temperature and total flow.
- A ***custom-designed*** 25 inch diameter "U" groove capstan wheel is mounted at the top of the tower and aligned in the center of the heater(s). The capstan wheel is driven with motor/encoder/gear box to provide 0-120 ft/min speed range. A variable frequency drive with encoder feedback precisely controls wheel speed.
- An Allen Bradley Micrologixs PLC controls the heater(s) power intensity and monitor wheel speed.
- Supplied with Ethernet port for future communication.
- The IR heaters are mounted fixed on the frame.
- The electrical controls will be contained in a NEMA 12 style enclosure
- A remotely mounted 5.7" color touch screen operator display is used to control tower operation.
- *Right to Left direction track.*

SYSTEM SPECIFICATIONS:

- **Tower height / finish –** 15ft. aluminum with clear anodized finish.

Tube diameter range – 0.25 to 3" inch OD full half circle.

6" ID short wavelength IR heaters –

- (2) model 4069-18R-38L 38" long heater (bottom)

Number of zones – two (top / bottom)

Capstan Driven wheel – 25" diameter. 0-120 ft / minute, VFD drive with remote control, encoder feedback signal, fixed "U" groove option.

Guide wheels – adjustable guide wheels for product guiding before and after capstan wheel. * every guide wheel to be 2 ½" diameter to be same as cap stand. Same as down stand, guide wheel in center of tower – issue with heavier tubing it twist to one side and can it be supported both sides .

Heater to Tower mounting – fixed.

Minimum height from floor – 48 inches or as required

System Power – 480V/3Ph/60Hz; 120 FLA

System Water cooling – 12.2 gallons/ minute, 3/4 inch NPT inlet / outlet, connections at top of the tower. (*Chilled water supply by customer*)

Control system – NEMA 12 style enclosure mounted to tower. Allen Bradley MicroLogix PLC with digital comm. port. Two (2) each three phase, phase fired, digital SCR power controllers with individually controlled 0-100% voltage output adjustment range. 150 AMP Main Circuit breaker, Allen Bradley Power flex VFD with encoder feedback and remote control capability. System includes a water flow and thermostat sensor and logic to protect heaters from overheating..

Remote control - 5.7" Color touch screen operator display to be mounted in Main Extruder Control Panel for ergonomic system control.

Floor mounting - Tower mounted on captive tracks with bearings to provide access to extruder.

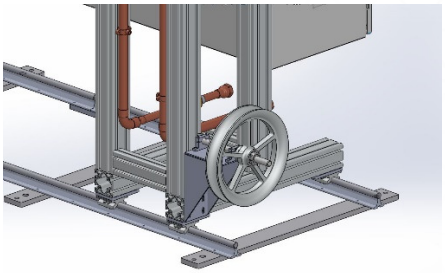
Option: Start-up assistance of oven can be quoted seperately and as needed.

Oven Specification Summary

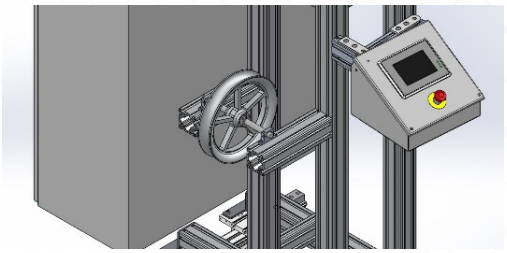
Maximum Product Diameter:	3.0
Heated Length:	76"
Overall Tower Height:	14 feet, +6"/-0"
Power Requirement:	480/3/60; 120 A
Number of Zones:	2
Capstan diameter	25"
Driven Capstan Speed Range:	0 to 120 feet per minute
Heater height (from floor)	48 inches (to be confirmed upon die selection)

a. Capstan wheel is 25" +
b. Two turn wheels included – Groove and Diameter TBD by New Age, may result in additional cost.

Entry Side Guide Wheel



Exit Side Guide Wheel



ITEM #3a: Pyrometer – Product Temp Sensor

Raytek MM series optical thermometer will read and display the extrusion surface temperature exiting the upper oven. 1.3mm spot diameter, temp range -40C to 800C, video sighting, air purge collar and heat-shield installed with mounting. Includes:

- 7" Display is to be installed into a remote mounted square painted steel enclosure with dimensions of 16" x 16" x 8" and supplied with 15 ft. cable and an e-stop button.

ITEM #3b: Ladder for Cure Tower

- Safety platform that can be anchored to the floor and installed adjacent to the tower.

ITEM #4: SYSTEM ENGINEERING AND PROJECT MANAGEMENT

The system engineering consists of the preparation for DS provided equipment only of necessary drawings and documents to define proper installation procedures and sizes of the following:

a) All service connections including electrical, compressed air, water and return drains.
b) Exhaust locations and sizing(as required).
c) Floor and foundation plans of equipment with proper equipment spacing for operation and access.
d) Support devices and procedures to provide a thorough and proper installation.

This material is supplied complete upon the preparation for equipment shipment. Machinery maintenance and operation manuals are included as well as a system operations manual.

A project manager is assigned to coordinate all communication between customer and Davis-Standard Team. Periodic project meetings with customer are arranged as needed to maintain communication regarding project status, schedule, and technical details.