

Flawless implementation. Expert support.

Davis-Standard is recognized globally as the leader in high-performance converting and extrusion systems. But our capabilities go far beyond our equipment. They extend to our professional training experts, laboratory personnel, design engineers, and hands-on field engineers who work with you every step of the way. Your success is our success.



Cold Feed Rubber Silicone Extruders

Overview

For laboratory, coextrusion, and silicone striping applications, Davis-Standard manufactures a complete line of cold feed rubber silicone extruders. Available in several configurations and sizes ranging from 1 1/2-inch (40mm) to 8 inches (200mm), these extruders offer processors the type of versatility and dependability required for laboratory and specialty rubber applications.

Features

- Available as a silicone strainer, with a vertical crosshead, and in Lo-Boy configurations
- Unique pneumatic roller feeder to compensate for feedstrip variations
- Optional stainless steel hopper with sight glass for pellet stock capability

MACHINE DESIGN PARAMETERS

	Size	1 ½ in. (40mm)	2 in. (50mm)	2 ½ in. (65mm)	3 ½ in. (90mm)	4 ½ in. (115mm)	6 in. (150mm)	8 in. (200mm)
Physical Data	Extruder Approx. wt.	1,700 lbs. (771kg)	2,000 lbs. (907kg)	3,250 lbs. (1474kg)	5,250 lbs. (2381kg)	8,650 lbs. (3924kg)	11,500 lbs. (5216kg)	12,000 lbs. (5443kg)
	Center Line	42 1/4 in. (1073mm)	42 1/4 in. (1073mm)	42 1/4 in. (1073mm)	42 1/4 in. (1073mm)	42 1/4 in. (1073mm)	42 1/4 in. (1073mm)	42 1/4 in. (1073mm)
	Length	47 in. (1194mm)	51 in. (1295mm)	61 in. (1549mm)	78 in. (1981mm)	97 in. (2464mm)	127 in. (3226mm)	120 in. (3048mm)
	Width	43 in. (1092mm)	43 in. (1092mm)	45 in. (1143mm)	62 in. (1575mm)	66 in. (1676mm)	71 in. (1803mm)	71 in. (1803mm)
	Screw Removal	33 in. (838mm)	37 in. (940mm)	55 in. (1397mm)	60 in. (1524mm)	73 in. (1854mm)	96 in. (2438mm)	86 in. (2184mm)
	No. Barrel Zones	1	2	2	2	2	3	2
	L/D Ratio	10.5:1	10.5:1	10.5:1	10.5:1	10.5:1	10.5:1	7:1
	Standard Feed Strip	3/8 x 1 3/4 in. (10mm x 44mm)	3/8 x 2 1/4 in. (10mm x 57mm)	3/8 x 2 3/4 in. (10mm x 70mm)	3/8 x 3 3/4 in. (10mm x 95mm)	3/8 x 4 3/4 in. (10mm x 121mm)	3/8 x 6 1/4 in. (10mm x 159mm)	3/8 x 8 1/4 in. (10mm x 210mm)
	Standard Feed Widths	2.0 in	4.0 in	5.0 in	7.25 in	6.5 in	8.0 in	12.0 in
	Gear Ratio	6.53:1	6.53:1	17.26:1	24.73:1	25.35:1	24.29:1	23.93:1
Gearbox	Thrust Bearing B-10 Life	500,000	398,000	546,000	421,000	137,000	257,000	32,000
	100 RPM 5000 psi							
	Standard Rubber HP	15HP	20HP	30HP	60HP	125HP	200HP	N/A
	Standard Silicone KW	3.75	7.5	15	30	45	75	93
	Standard Timing	50RPM	50RPM	60RPM	60RPM	50RPM	40RPM	40RPM
Max. Rating	.33HP/RPM	.33HP/RPM	.76HP/RPM	1.58HP/RPM	2.24HP/RPM	5.44HP/RPM	5.44HP/RPM	
Service Requirements	Rubber Drive & Temp. Control	46FLA	62FLA	78FLA	120FLA	232FLA	343FLA	N/A
	Silicone Drive Only	15FLA	21FLA	33FLA	65FLA	91FLA	152FLA	180FLA
	Water	5GPM	10GPM	14GPM	27GPM	34GPM	40GPM	45GPM
	Inlet & Outlet Pipe Size	1 in. (25mm)	1 in. (25mm)	1 in. (25mm)	1 1/2 in. (40mm)	1 1/2 in. (40mm)	1 1/2 in. (40mm)	1 1/2 in. (40mm)
	Closed Loop Tank Capacity	15 gal. (57 liters)	15 gal. (57 liters)	15 gal. (57 liters)	15 gal. (57 liters)	30 gal. (114 liters)	30 gal. (114 liters)	30 gal. (114 liters)
	Air Requirements (Static)	50 PSI	50 PSI	50 PSI	50 PSI	50 PSI	50 PSI	50 PSI

Superior Gearcase

- Horizontally mounted double reduction parallel shaft reducer with integral thrust bearing for simplicity and economy.
- Single reduction gearbox for 1 1/2-inch (40mm) and 2-inch (50mm) extruders.
- Leak-free, non-contacting labyrinth oil seals never wear out, eliminating expensive oil seal maintenance.
- Thrust shaft is mounted on pre-loaded radial bearings to maintain perfect screw-to-barrel alignment in spite of heavy bull gear radial loading.
- Single helix gear teeth for quiet, vibration-free operation.
- All gearing machined to AGMA Class 11 specifications.
- Lubrication supplied to the gears and bearings by an externally mounted, positive displacement gear pump to provide ample oil through the entire RPM range.

Pressure Roller Feed

- Automatic feed roll regulation with minimal operator requirements.
- Feed roll rate regulated by a pneumatically controlled torque-sensing clutch driven from the main thrust shaft.
- Uniform, consistent feed rate that automatically compensates for feed strip size variations.
- Right-hand feed is standard with left-hand as an available option.
- Feed section is a machined, high strength casting cored for water cooling. Includes installed piping and valves for thermal control.

Extruder Barrel

- Wear-resistant liner of iron/boron bimetallic material cast into a 4140 steel barrel assembly (harder alloys available).
- Integral liner/jacket construction provides maximum heat transfer efficiency and multi-zone feature.
- Temperature control via external water circulating unit or customer plant, or chilled water supply.
- Barrel designed for operating pressure up to 10,000 psi.
- Operating temperatures range from water supply temperature to 250°F (121°C).
- Barrel supplied with rupture disc for overpressure protection.

Head Clamp

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

Hinged Head Support

- Hinges can be mounted on the left, right, or both sides.
- Hinges designed for rapid head closure and alignment.
- Hinges are adjustable for proper alignment and may be swung to the side of the machine for preheating, cleaning, and tool changes.

Associated Equipment (Standard)

- Stock screw, cooling pipe, and union
- Breaker plate, screens, or spacer ring (stainless steel)
- Belts, sheaves, and belt guard
- Pressure transducer and indicator with high alarm shutdown
- Maintenance manuals
- Pressure alarms (hi-low)

Associated Equipment (Required)

- Extruder stock screw
- Temperature control system
- Drive system
- Extrusion heads

Optional Equipment

- Common base
- OCS, drive cabinet, motor mounted and wired
- Manifold piping
- Air pads or casters
- Pivot assembly
- Dual hinges
- Stock temperature indication
- Various roller feed ratios
- Stainless steel hopper and adapter
- Lo-Boy
- Special liners
- Optional breaker plates
- Screw jack (manual, auto)
- Full laboratory, instruments
- Jog reverse
- Precision drive regulation
- Coordinated drive
- Clean room grade
- Special paint
- Motor driven feed roll