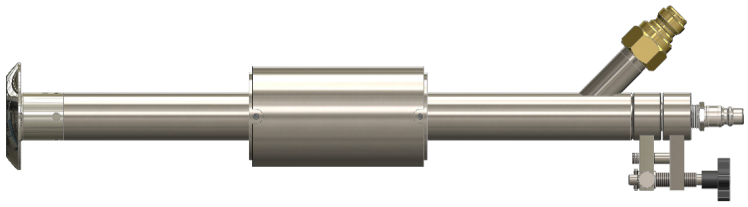
Data Sheet

Selas Adjustable Oil Lance (SAOL) Burner

The Selas Adjustable Oil Lance (SAOL) is designed for regenerative glass furnaces, with a mechanism for adjusting the position of the oil nozzle in relation to the atomizing air nozzle, thus affecting flame length.



SAOL Burner Specifications

Burner Capacity MW mm BTU		Oil Flow LPH GPH		Atomizing Air Flow Nm^3/hr SCFM		Atomizing Air Pressure Barg PSIG		OffSide Cooling Air Barg PSIG	
Min.	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**
0.53	5.27	49.4	493.7	16.7	167.3	1.4	3.1	0.1	0.4
1.8	18	13	130	10.4	104	20.0	45.0	2.0	6.0

	SAOL 2.5		SAOL 2.5		SAOL 2.5			
			SAOL 3.0		SAOL 3.0		SAOL 3.0	
	Min	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**
mm BTU	1.8	9.0	2.4	12.0	3.0	15.0	3.5	18.0
MW	0.53	2.64	0.70	3.52	0.88	4.40	1.03	5.27
GPH	13	65	17	87	22	109	25	130
LPH	49.4	246.8	65.8	329.1	82.3	411.4	96.0	493.7

NOTES:

1. Above data is based on net heat value (LHV)
2. Normal condition: 1 atmosphere, 0°C.
3. Atomizing Air based on 0.80 SCFM per 1 gal of #6 fuel oil.
4. Actual data varies by each application condition.
5. Assume 138,000 BTU/Gal.
6. Burner sizes can overlap, consult Selas for details.

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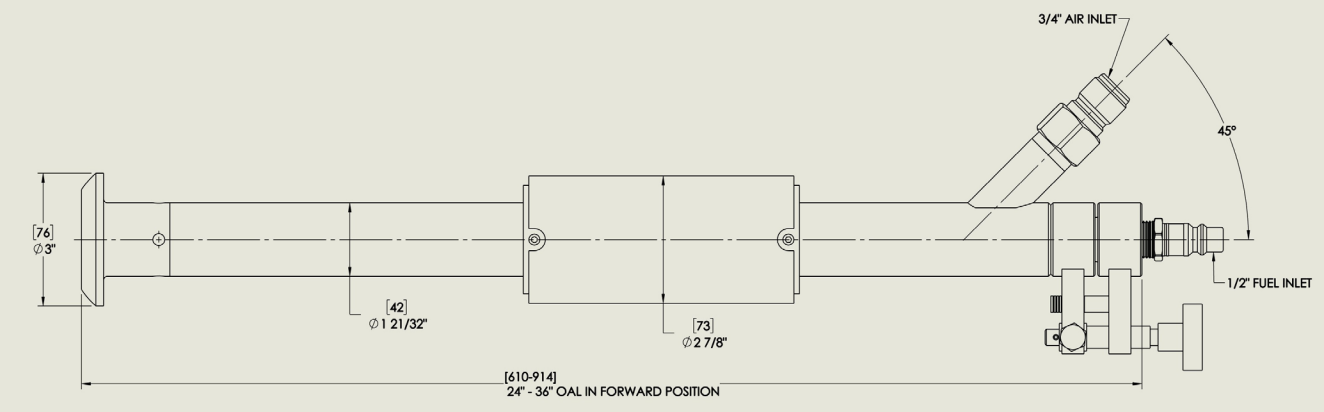
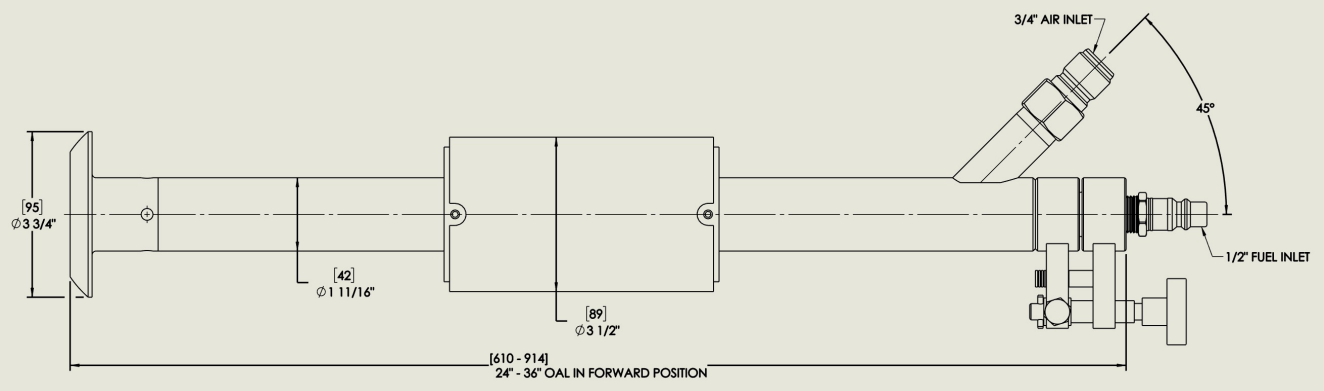
Typical Burner Length and Dimensions - Model 2.5



Typical Burner Length and Dimensions - Model 3.0



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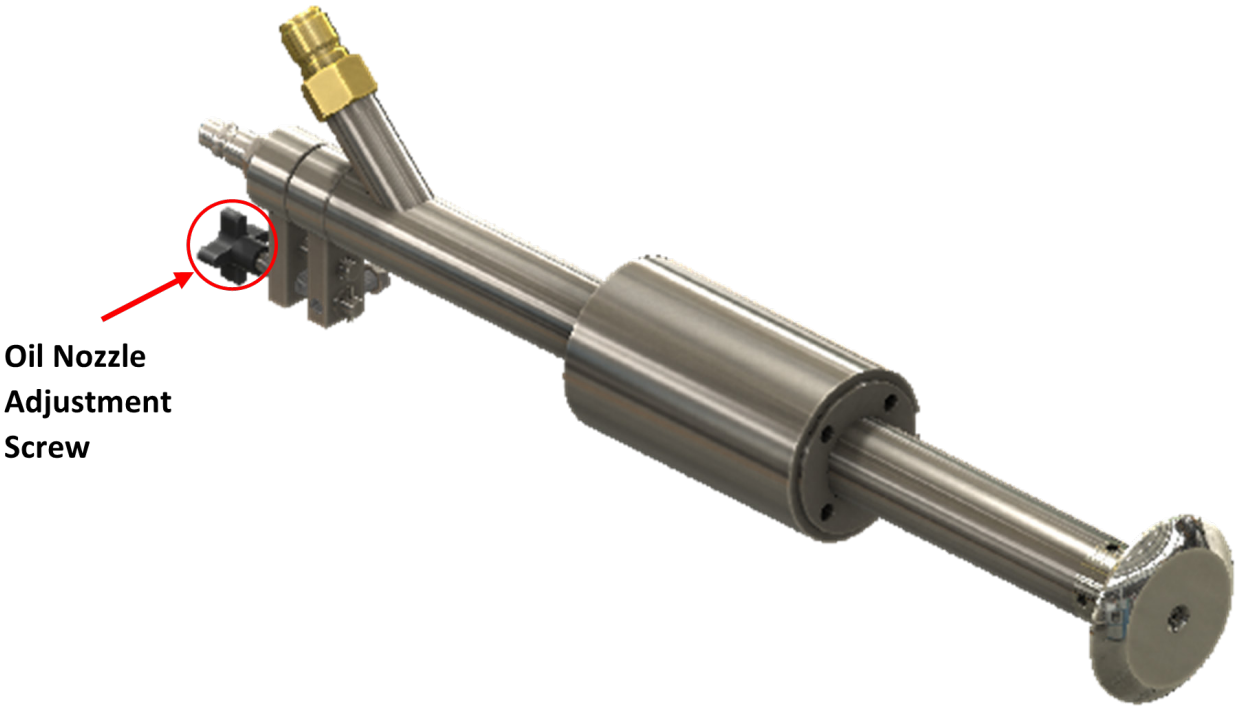
Burner Settings

Shown below is the oil nozzle adjustment screw. By rotating the adjustment knob clockwise, the position of the oil nozzle moves back inside the atomizing air nozzle. This creates more area for the atomizing air to mix with the oil stream, enhancing the atomization and shortening the flame. If the adjustment knob is rotated counterclockwise, the oil tip moves forward and the mixing of the atomizing air and oil is less, and the flame will be slightly longer. On the adjustment mechanism, there is a scale with engraved lines, the nozzle position is noted as 0 – 4 rings. Position 0 being fully CCW, position 4 being fully CW, and position 2 being the standard starting position.

Adjusting the atomizing air pressure from low to higher pressure increases the atomizing effect and shortens the flame.

Different hole angles in the pressure plates are available to change the flame length and shape; 15, 25, and 45 deg angles. The lower angle makes a longer, narrower flame and the higher angle makes a shorter, wider flame.

Typically, heavy oils will require higher levels of atomization to break up the oil stream. Light oils will need less atomization to break up the oil stream.



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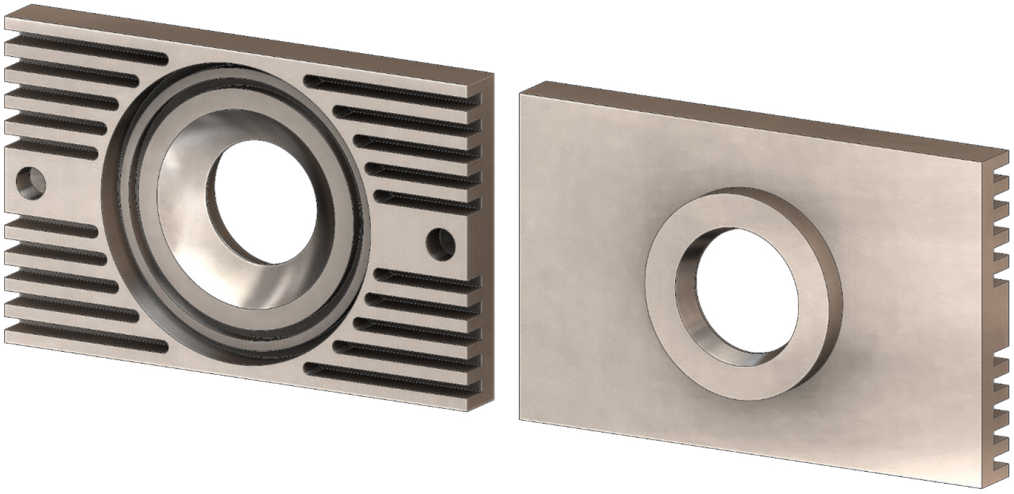
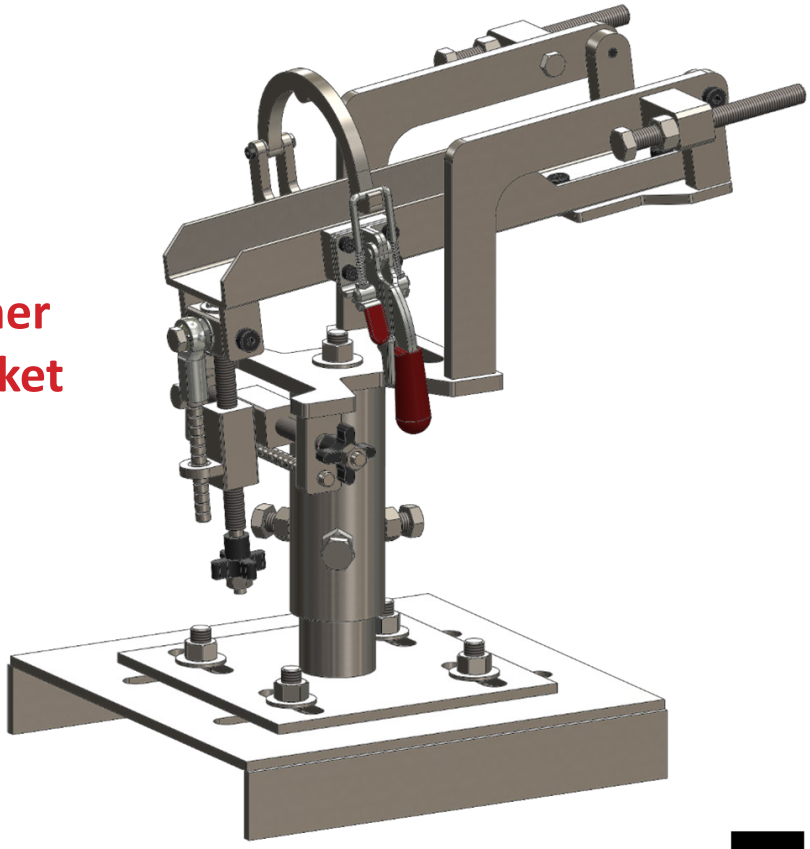
Installation Accessories

- Seal Plate: to be installed between burner outer nozzle and burner block.
- Burner Bracket: Holds the burner, adjusts mounting position; allows vertical & horizontal firing adjustments.
- For detailed burner size and installation requirements, please contact Selas.

Seal Plate



Burner Bracket



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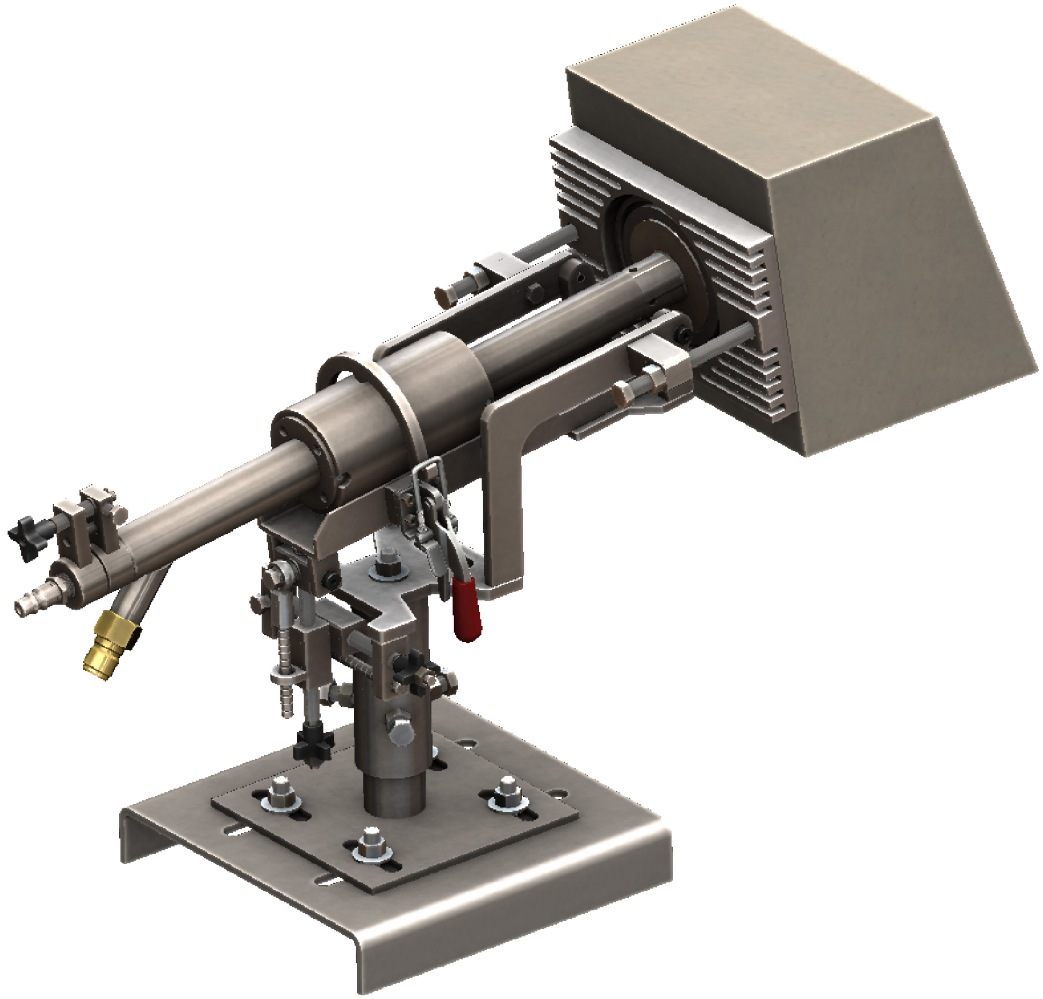
Selas Adjustable Oil Lance (SAOL) Burner

- Burner Bracket Layout (BBL): The burner is shown below in the bracket with the seal plate between the burner nozzle and burner block. Customer order detail can show actual furnace detail for installation reference.

Burner Bracket Layout



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