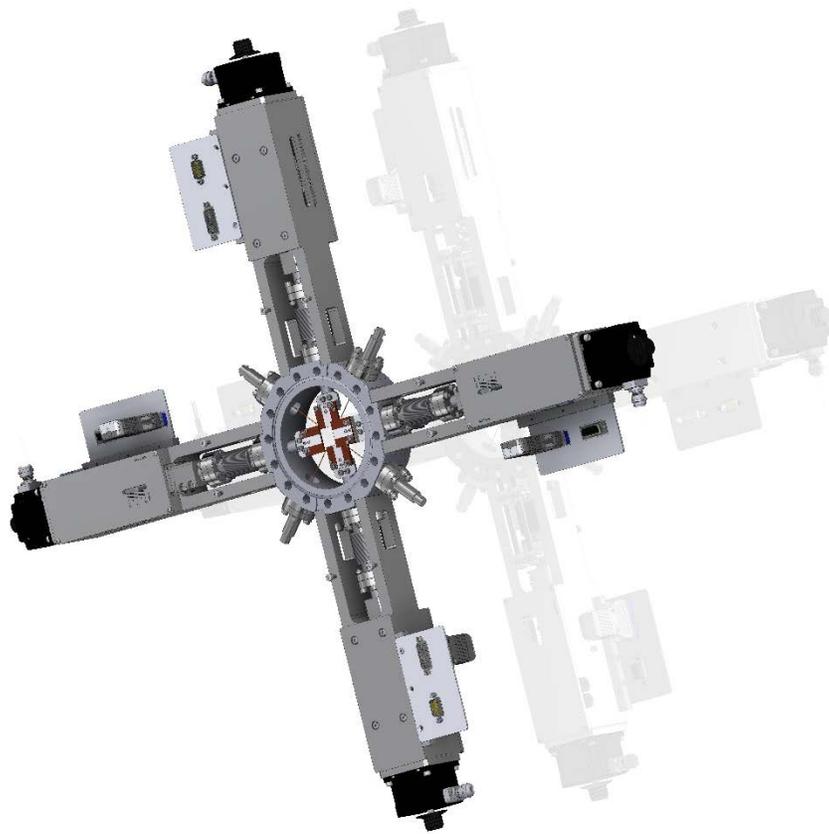




High Precision Slits

Custom and Standard Slit Designs



SLT-100-P

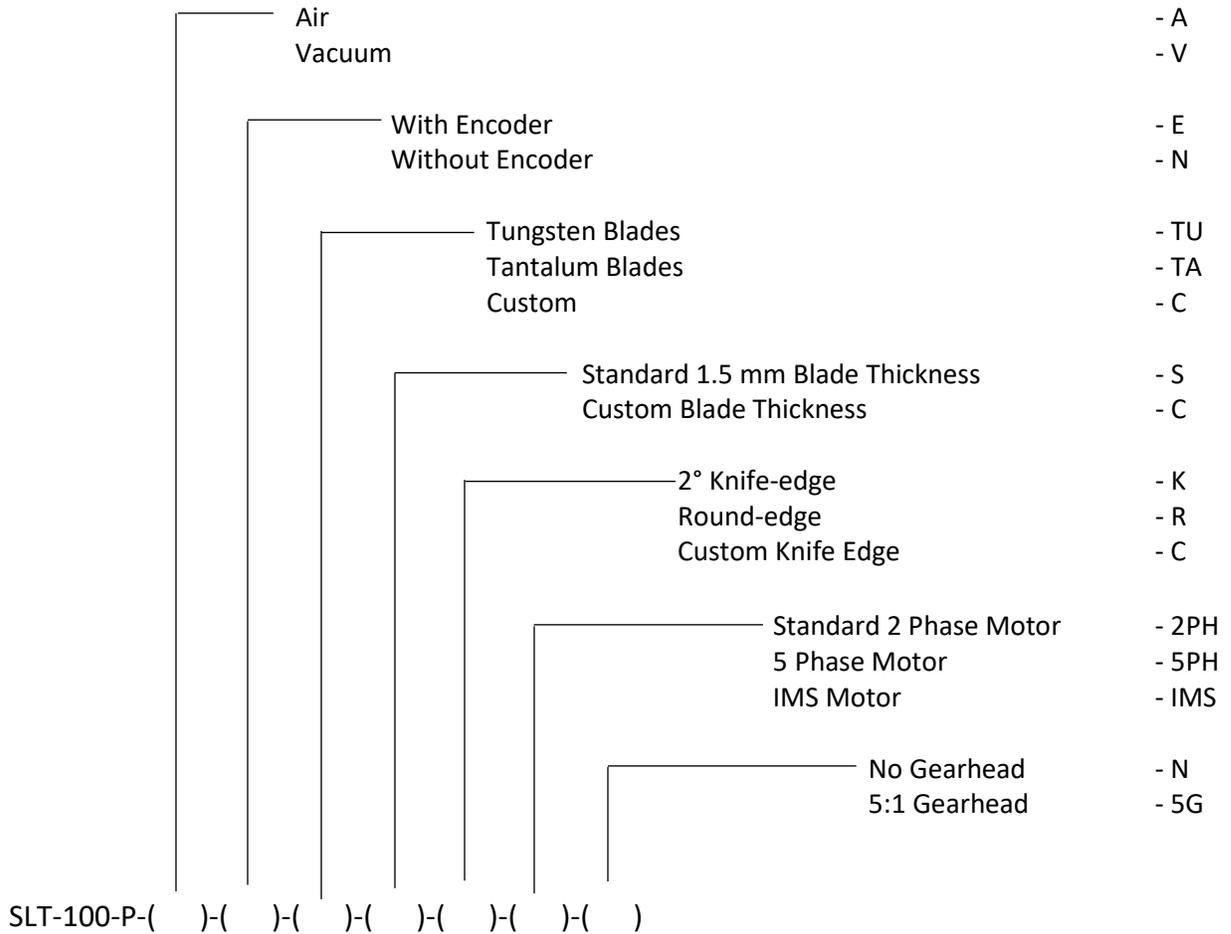


These high-precision slits systems consist of four blades that are housed in an aluminum body. These slits use standard micro-stepped stepper motors that can be controlled with a wide array of controllers/drivers available on the market. The design incorporates mechanical limit switches.

Characteristic	Typical Values
Aperture Size (Fully Open)	24 mm
Blade Overlap (Fully Closed)	Complete
Blade Thickness	1.5 mm (5, 7, 10 mm on Request)
Blade Material	Tungsten Heavy Alloy (95%W), Tantalum, Copper
Housing Axial Length	77 mm (112 mm with Thick Blades)
Beamline Interface	NW (QF) 40 for Inert Gas or Vacuum
Internal Environment	Air, Inert Gas, Vacuum (10^{-6} mbar)
Beam Monitoring	Available
Water Cooling	Consider SLT-400 or SLT-600 Series
Encoders	Differential Rotary Encoders
Motors	2-Phase Stepper Motors (5-Phase on Request)
Mechanical Resolution	1.6 μm / step (or finer with gearbox and/or micro-stepping)

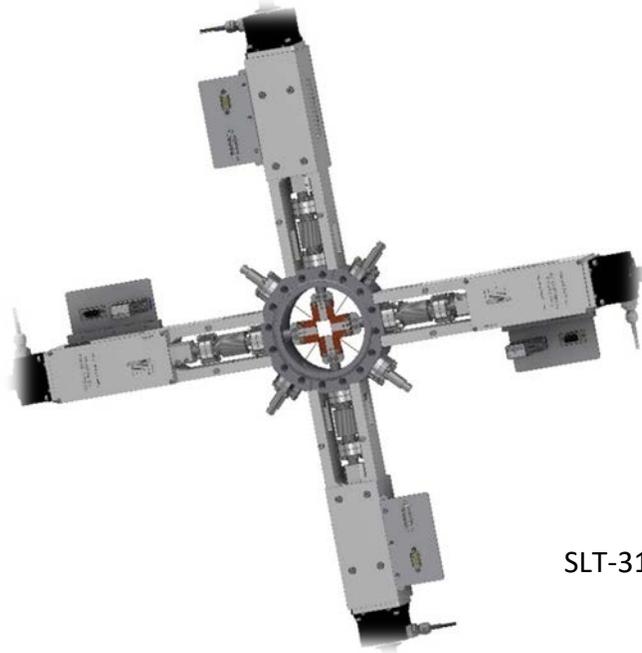
Ordering Information

The SLT-100-P can be ordered with different configurations. Please use the codes provided below when ordering. Please call or e-mail to ask about customization if your application requires it.



For example, a chamber configured for Air, No Encoder, Tungsten Blades, Standard Thickness, No Beam Monitoring, Standard 2 Phase Motor, with no gearhead would be denoted by:
SLT-100-P-A-N-TU-S-K-2PH-N.

SLT-310 Series UHV Slits



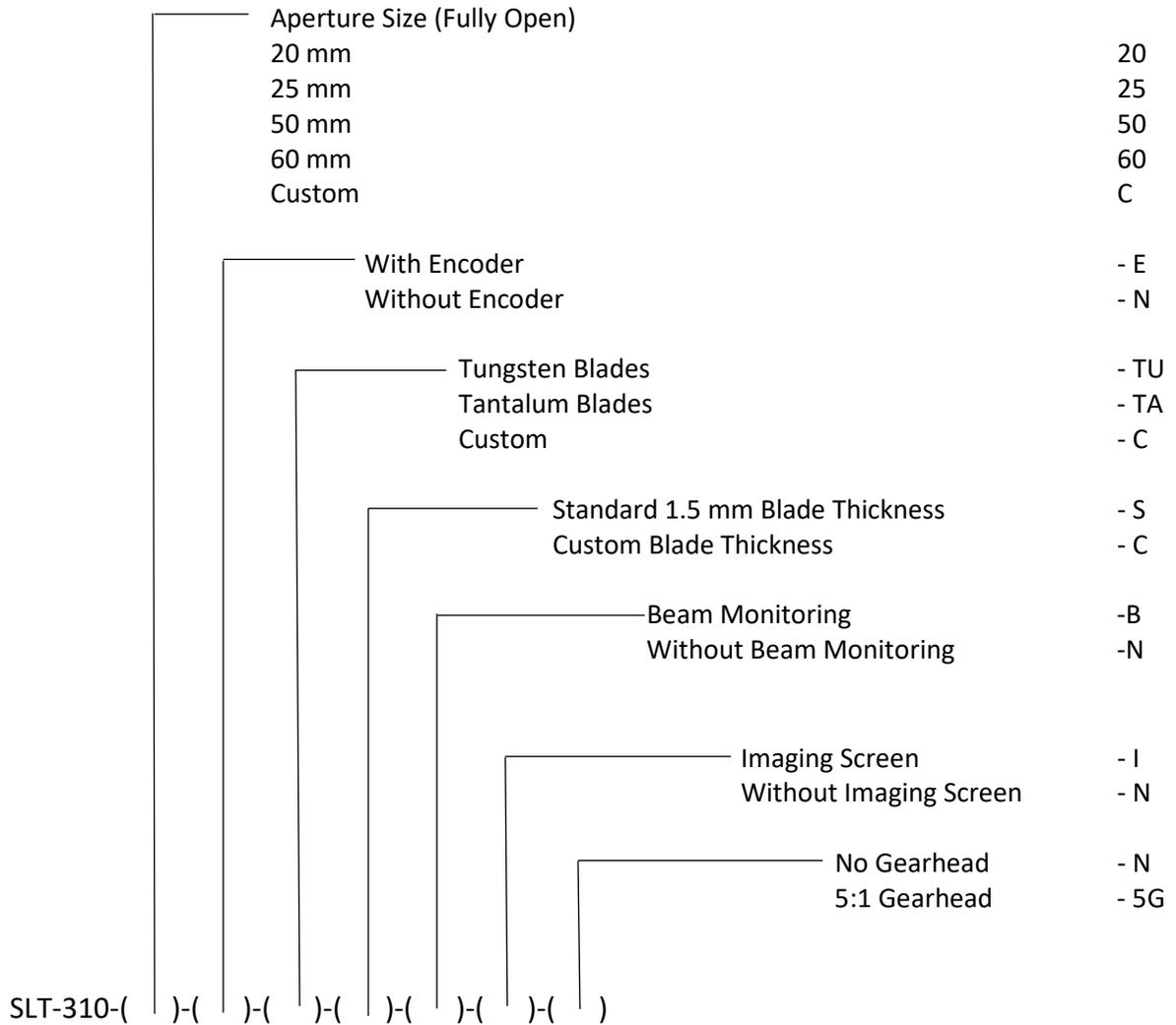
SLT-310-20 (25 mm aperture) shown

The SLT-310 series slits are designed for UHV and can be used for apertures up to 60 mm. Blades are actuated independently by 4 actuators mounted on the slit body. This slit system is designed to be mounted inside a variety of different ConFlat flanges.

Characteristic	Typical Values
Aperture Size (Fully Open)	20, 25, 50, 60 mm
Blade Overlap (Fully Closed)	> 2 mm
Blade Thickness	1.5 mm (others on request)
Blade Material	Tungsten Heavy Alloy (95%W), Tantalum, Copper
Housing Axial Length	45 mm
Beamline Interface	DN63, DN100, DN160, DN200
Internal Environment	UHV (<10 ⁻⁹ mbar)
Beam Monitoring	Available
Water Cooling	Consider SLT-400 or SLT-600 Series Slits
Encoders	Renishaw Incremental or Absolute Linear Encoders
Motors	2-Phase Stepper Motors (5-Phase on Request)
Mechanical Resolution	1.6 μm / step (or finer with gearbox and/or micro-stepping)
Other	Maximum aperture size is a function of flange size

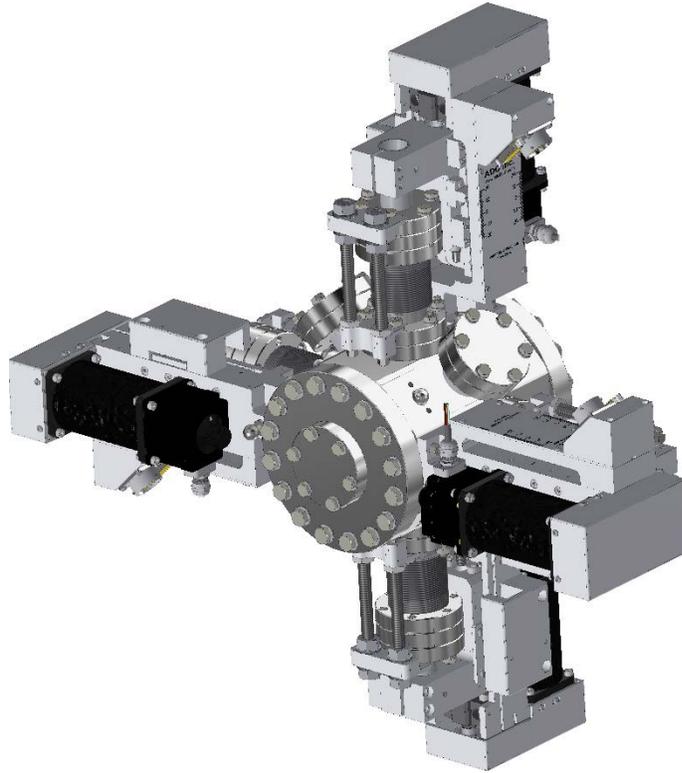
Ordering Information

The SLT-310 can be ordered with different configurations. Please use the codes provided below when ordering. Please call or e-mail to ask about customization if your application requires it.



For example, a chamber configured for 25mm Aperture, No Encoder, Tungsten Blades, Standard Thickness, Beam Monitoring, Without Imaging Screen, with no gearhead would be denoted by: SLT-310-25-N-TU-S-B-N-N.

SLT-400-250 UHV Slit

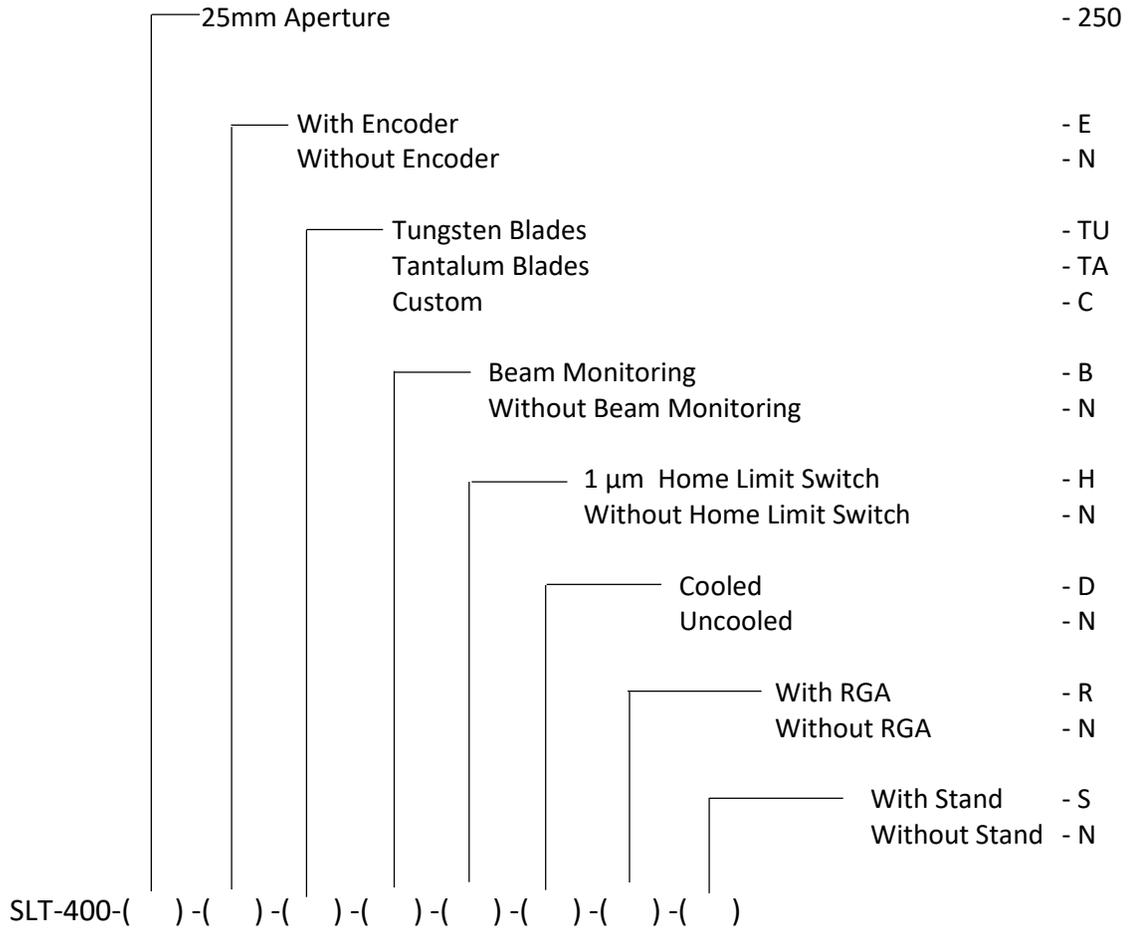


The SLT 400-250 slit system is designed for UHV and can be used for apertures up to 25 mm x 25 mm. Blades are actuated independently by 4 actuators mounted on the slit body. This slit system was designed to be robust and easily serviceable.

Characteristic	Typical Values
Aperture Size (Fully Open)	25 mm
Blade Overlap (Fully Closed)	8 mm
Blade Thickness	4 mm
Blade Material	Tungsten Heavy Alloy (95%W), Tantalum, Copper
Housing Axial Length	200 mm
Beamline Interface	DN100
Internal Environment	UHV (<10 ⁻⁹ mbar)
Beam Monitoring	Available
Water Cooling	Available (Consult with AVS US with Heat Loads)
Encoders	Renishaw Incremental or Absolute Linear Encoders
Motors	2-Phase Stepper Motors (5-Phase on Request)
Mechanical Resolution	0.17 µm / step

Ordering Information

The SLT-400 can be ordered with different configurations. Please use the codes provided below when ordering. Please call or e-mail to ask about customization if your application requires it.

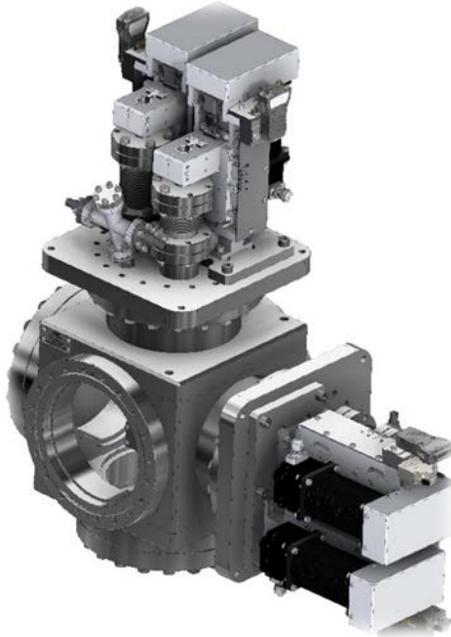


For example, a chamber configured with 25mm Aperture, with an Encoder, Tungsten Blades, without beam monitoring, 1 μ m Home Limit Switch, Cooled, without RGA and a Stand would be denoted by:

SLT-400-250-E-T-N-H-D-N-S

SLT-600 Series UHV Slit

(very customizable)

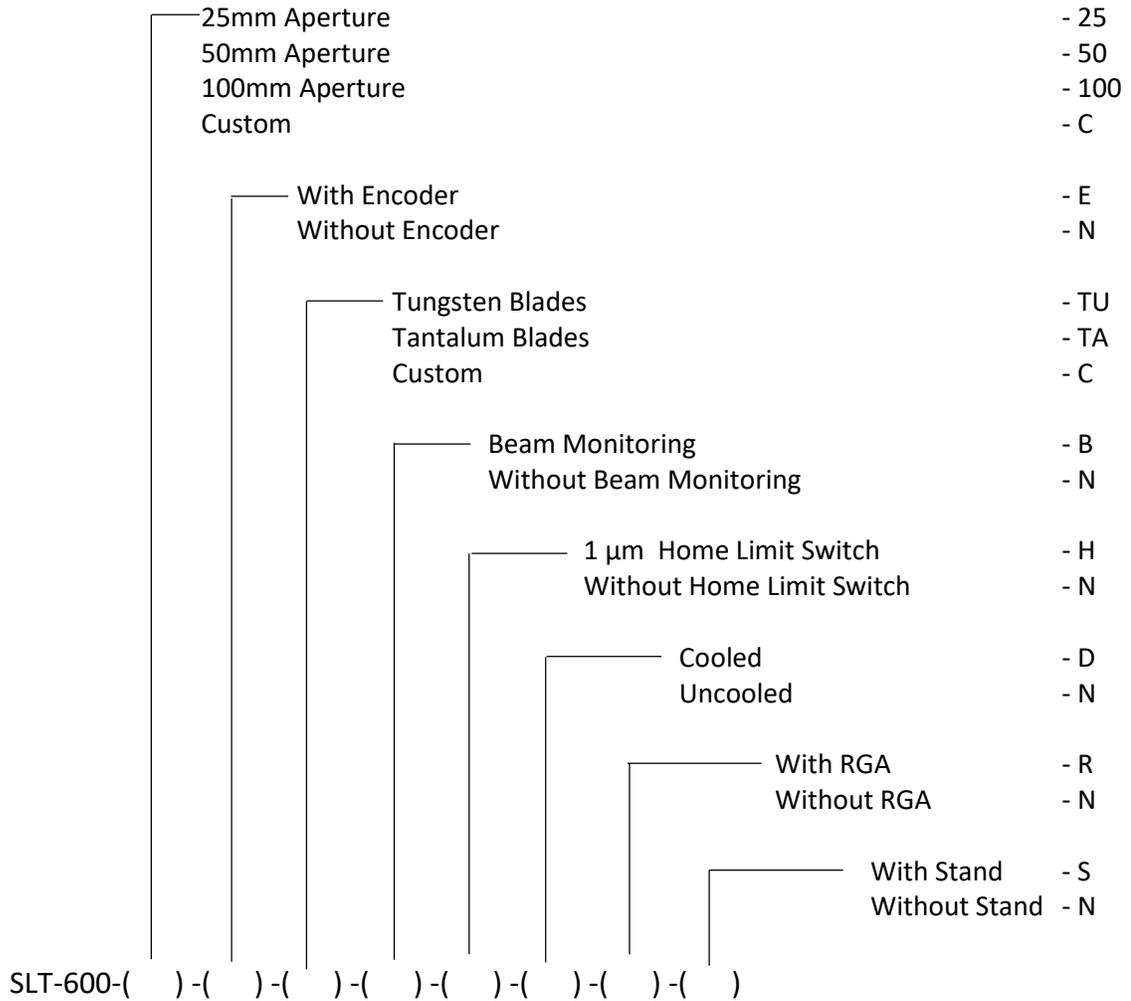


The SLT-600 slit system is designed for UHV and can be used for apertures from 25 mm x 25 mm all the way up to 100 mm x 100 mm. Blades are actuated independently by 4 actuators mounted on the slit body. This slit system was designed to be robust and easily serviceable. AVS|US draws from an array of standard components to rapidly develop a reliable solution to each beamline's needs.

Characteristic	Typical Values
Aperture Size (Fully Open)	25, 50, 100 mm
Blade Overlap (Fully Closed)	20, 30, 50 mm
Blade Thickness	5, 10 mm
Blade Material	Tungsten Heavy Alloy (95%W), Tantalum, Copper
Housing Axial Length	270, 318 mm
Beamline Interface	DN160, DN200 (or smaller with adapter)
Internal Environment	UHV (<10 ⁻⁹ mbar)
Beam Monitoring	Available
Water Cooling	Available (Consult with AVS US with Heat Loads)
Encoders	Renishaw Incremental or Absolute Linear Encoders
Motors	2-Phase Stepper Motors (5-Phase on Request)
Mechanical Resolution	0.17 μm / step

Ordering Information

The SLT-600 can be ordered with different configurations. Please use the codes provided below when ordering. Please call or e-mail to ask about customization if your application requires it.



For example, a chamber configured with 25mm Aperture, with an Encoder, Tungsten Blades, 1 μm Home Limit Switch, Uncooled, without RGA and a Stand would be denoted by:
SLT-600-25-E-T-H-U-N-S

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