

Gooch & Housego



STALLION

'Industry Standard' Acousto-Optic Q-Switch

A 'Stallion' version of our industry standard water-cooled Acousto-Optic Q-Switch, for use in high power lamp or diode pumped Nd:YAG lasers.

The patented 'Stallion' manufacturing technique provides superior corrosion resistance whilst maintaining optimum performance and RF power handling capabilities up to 100W (for shear mode options).

Combining top grade fused silica with high quality optical finishing and in-house anti-reflection coatings, this Q-Switch exhibits very low insertion loss and high damage threshold.

In addition to the standard product shown, custom configurations are available for specialised applications. These include alternative housing options, wavelengths and RF frequencies. This product is also available in Crystal Quartz.

Our scientists and engineers are available to assist in selecting the most appropriate model of Q-Switch and also RF driver for your application.

Please contact the sales team for further information.

Key Features:

- Industry standard for Nd:YAG lasers
- Superior corrosion resistance
- Stainless steel cooling channels
- High damage threshold
- Push fit water-connectors
- Up to 100W RF power handling
- Custom configurations available

Application examples:

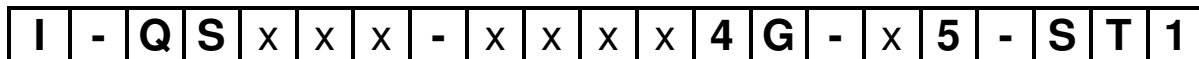
- Material processing:
 - Marking
 - Engraving
 - Scribing
 - Surface treatment
- Medical (surgery)
- Scientific (PIV)

General Specifications

Interaction material:	Fused Silica
Wavelength:	1064nm
AR coating reflectivity:	< 0.2% per surface
Damage threshold:	> 1GWcm ⁻²
Transmission (single pass):	> 99.6%
Static insertion loss:	≤ 6% at 50W laser power
VSWR:	< 1.2:1 (<1.4:1 at 50W RF power)
RF power rating (maximum):	50W cw for Compressional acoustic mode 100W cw for Shear acoustic mode
Water flow rate:	> 190cc / minute
Water-cooling channel material:	Stainless steel 316
Recommended water temperature:	+22°C to +32°C
Thermal switch cut-off:	+55°C +/- 5°C
Storage temperature:	0 to +50degC

Ordering Codes

Example: I-QS027-4S4G-N5-ST1 (Q-Switch, 27.12MHz, 4mm active aperture, shear mode, fused silica, 1064nm, 4mm OD straight push fit water-connectors, BNC, Stallion housing with M3 mounting holes)



Code	Frequency	Code	Active aperture	Code	Acoustic mode	Code	Water connector
024	24.00MHz	1.6	1.6mm	C	Compressional	N	4mmOD straight push fit
027	27.12MHz	2	2.0mm	S	Shear	P	6mmOD straight push fit
041	40.68MHz	3	3.0mm			Q	4mmOD right angle push fit
068	68.00MHz	4	4.0mm			U	6mmOD right angle push fit
		5	5.0mm				
		6.5	6.5mm				
		8	8.0mm				

- 40.68 & 68MHz options are only rated for use with 50W RF drive power
- 40.68 & 68MHz options are only available in active apertures of up to 5.0mm

