

# Integrity VCS™ Series Vibration Control System



- Available in 6, 8 and 12 inch thickness
- Athermalized Design for Excellent Thermal Stability
- Proprietary constrained layer damping attenuates broadband vibrations
- Non-corrosive sealing of holes and honeycomb cells
- Field upgradable pneumatic isolation with automatic leveling valves
- Integrated leveling feet

Newport's new Integrity VCS™ vibration control system combines the performance and value of our patented optical tables with a new, innovative isolation platform that features integrated shelf and mobility accessories to optimize laboratory space, organization and safety.

Integrity Series Vibration Control Systems (VCS) are composed of two components: a damped stainless steel work surface and either rigid or pneumatic isolators with automatic leveling valves integrated into a new frame design to deliver an economical isolation platform with superior isolation performance.

The vibration sources in the environment surrounding the optical table principally determine the level of isolation required in the isolator while the application and sources of vibration on the optical table surface are the determining factors in choosing an optical table. Integrity Vibration Control Systems are available in the most popular sizes and several performance levels to fit any budget. An optional overhead shelf is available to improve lab space utilization, organization and safety. Integrity VCS systems are available in 3 performance levels: Integrity 1, Integrity 2 and Integrity 3 Series.

## Integrity 1

Newport's Integrity 1 Series VCS™ systems are often used teaching labs and non-interferometric applications, such as communications using fiber or basic optical demonstrations. With the Newport configuration of broadband damping and honeycomb structures, the Integrity 1 provides an economical solution for standard vibration damping and isolation (with isolated option).

## Integrity 2

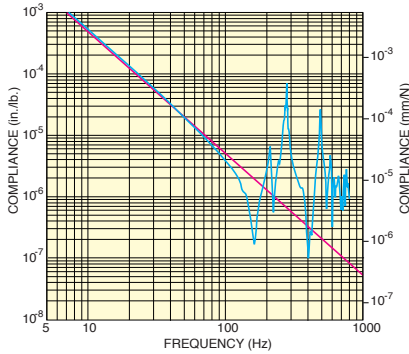
Newport's Integrity 2 Series VCS™ systems are often used in basic spectroscopy, multi-mode fiber, micro-positioning, and other non-interferometric applications. Compared to Integrity 1 Series, Integrity 2 has thicker working surfaces to provide better surface flatness and rigidity.

## Integrity 3

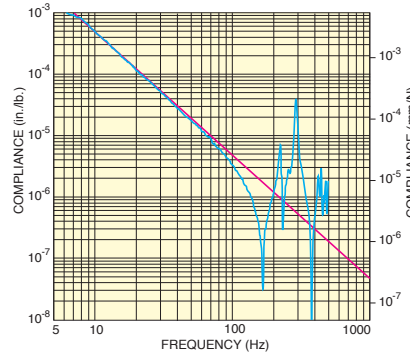
Newport's Integrity 3 Series VCS™ systems are often used in imaging, single mode fiber launch, micro-positioning or holography related applications. Compared to Integrity 2, Integrity 3 has built-in narrowband elastomeric tuned absorbers, further improving damping performance and reducing the table deflection.

# Integrity VCS™ Series Vibration Control System

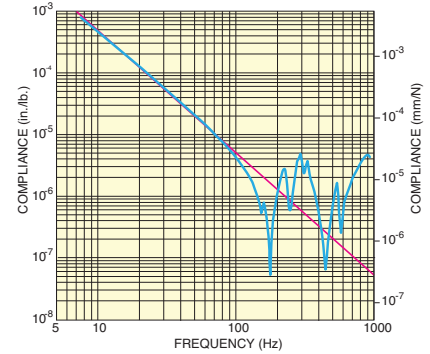
## Performance



Integrity 1



Integrity 2

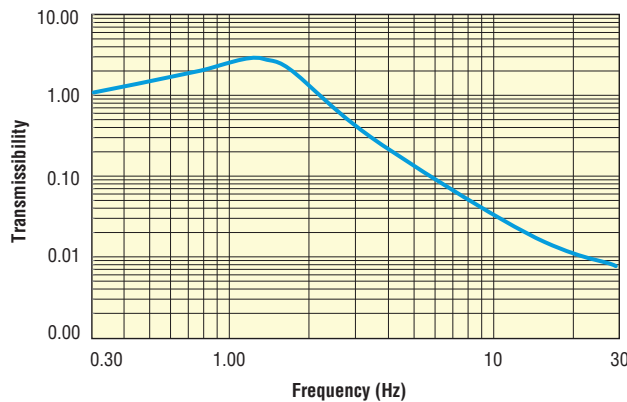


Integrity 3

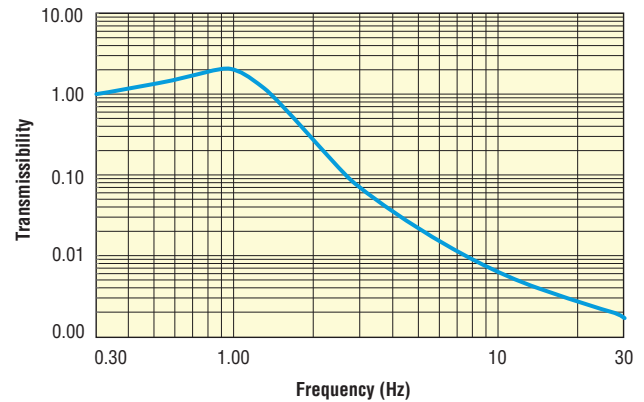
## Isolation Specifications

Model	Vertical Isolation*			Horizontal Isolation*			Amplification at Resonance		Valve	Self Centering
	Res(Hz)	5Hz(%)	10Hz(%)	Res(Hz)	5Hz(%)	10Hz(%)	Vert(dB)	Horz(dB)		
Integrity Isolators	1.5	88	98	1	88	98	9	6	IPV-S2	Yes

\*Vertical and Horizontal Isolation was measured with a load of 3,200 lbs.



Vertical



Horizontal

## ACCESSORIES

The Integrity VCS frame mounted instrumentation shelf provides storage space for instruments, power supplies, and other accessories when a full enclosure is not necessary. The instrument shelf is available in five sizes: 6 ft, 7 ft, 8 ft, 9 ft and 10 ft lengths. It can be mounted on three locations (front, middle and rear) along the frame. Simply match the shelf length to the length of your optical table. Each shelf system comes complete with two frame mounted vertical supports and an adjustable upper shelf made of particle board and aluminum angled extrusions that provide a shelf lip to prevent instrumentation from accidentally falling off the shelf.



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Integrity overhead shelf mounted in to an Integrity VCS System in the lower position.

## Working Surface Specifications

Typical Table Performance Values	Integrity 1	Integrity 2	Integrity 3
Mounting Hole Type	1/4-20 holes on 1 in. grid , M6-1.0 holes on 25 mm grid		
Length [ft. (mm)]	6(1800), 7(2100), 8(2400), 9(2700), 10(3000),		
Width [ft. (mm)]	3 (900), 4 (1200), 59.06 in. (1500)		
Thickness	5.88 in. (149 mm), 8 in. (203 mm), 12 in. (305 mm)		
Working Surface	400 series ferromagnetic stainless steel		
Surface Flatness [in. (mm)]	±0.006 (±0.15)		±0.004 (±0.1)
Top and Bottom Skins	0.134 in. (3.4 mm) thick with integrated damping layer	3/16 in. (4.8 mm) thick with integrated damping layer	
Deflection Under Load [in. (mm)]=	<9.0 x 10 <sup>-5</sup> (<2.3 x 10 <sup>-3</sup> )		<5.0 x 10 <sup>-5</sup> (<1.3 x 10 <sup>-3</sup> )
Core Design	Trussed honeycomb, vertically bonded closed cell construction, 0.010 in. (0.25 mm) Steel sheet materials, 0.030 in. (0.76 mm) triple core interface		
Broadband Damping	Constrained layer core, damped working surface and composite edge finish		
Tuned Damping	None		Narrowband elastomeric tuned absorbers
Hole/Core Sealing	Easy clean conical cup 0.75 in. (19 mm) deep, Non-corrosive high impact polymer material		

Typical Table Performance Values	Integrity 1	Integrity 2	Integrity 3
Maximum Dynamic Deflection Coefficient	<2.8 x 10 <sup>-3</sup>	<2.0 x 10 <sup>-3</sup>	<1.7 x 10 <sup>-3</sup>
Maximum Relative Motion Value [in. (mm)]*	<18.0 x 10 <sup>-9</sup> (<4.57 x 10 <sup>-7</sup> )	<12.0 x 10 <sup>-9</sup> (<3.0 x 10 <sup>-7</sup> )	<9.5 x 10 <sup>-9</sup> (<2.4 x 10 <sup>-7</sup> )

Note: All typical performance values are for 12 in. thick tables.

\*Calculated and verified by interferometric testing in relatively quiet lab; table on isolators.  
 = Calculated and verified for a 250 lb (114 kg) load placed in the center of a 12 in. table.

Payload (ft.)	Integrity 1 [lb (kg)]	Integrity 2 [lb (kg)]	Integrity 3 [lb (kg)]
4 x 6	2566 (1266)	2453 (1215)	2417 (1204)
4 x 7	2465 (1234)	2332 (1175)	2296 (1162)
4 x 8	2363 (1203)	2211 (1135)	2176 (1120)
4 x 9	2261 (1171)	2091 (1095)	2055 (1078)
4 x 10	2159 (1140)	1970 (1055)	1934 (1036)
59.06 x 6		2275 (1155)	2239 (1141)
59.06 x 7		2125 (1105)	2090 (1089)
59.06 x 8		1976 (1055)	1941 (1036)
59.06 x 9		1827 (1005)	1791 (984)
59.06 x 10		1678 (955)	1642 (932)

The INT-C is a caster upgrade kit that provides easy mobility for your Integrity system. The INT-C is compatible with all Integrity VCS systems. The kit includes a set of four casters and all of the required mounting hardware.



INT-C is a caster upgrade kit that provides easy mobility for your Integrity system.

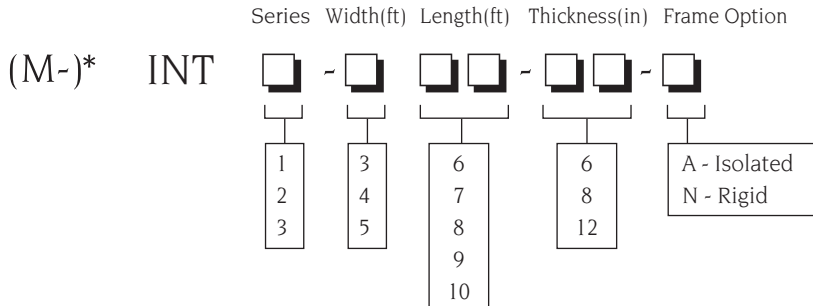
ATSE-PS Series universal power strips are available for many countries including USA, France, Germany, Japan, China, Israel, and many other countries. The power strip has six 16A, 250 V electrical outlets with a maximum capacity of 4000 Watts. The power strip has a no fuse circuit breaker and combined on/off and reset switch.



# Integrity VCS™ Series

# Vibration Control System

## Ordering Information



\*The M- prefix designates metric threads

Notes:

Integrity 3 Series only available in 8 in. and 12 in. thickness

Actual width measurement for 5 ft wide tables is 59.06 in. (1.5 m)

Example: INT1-48-12-A is a 4' x 8' x 12" thick isolated Integrity 1 Vibration Control System

## Accessory Ordering Information

Model	Description
INT-6	Instrumentation Shelf Kit, 6 ft., Integrity VCS System
INT-7	Instrumentation Shelf Kit, 7 ft., Integrity VCS System
INT-8	Instrumentation Shelf Kit, 8 ft., Integrity VCS System
INT-9	Instrumentation Shelf Kit, 9 ft., Integrity VCS System
INT-10	Instrumentation Shelf Kit, 10 ft., Integrity VCS System
ATSE-PS-FR	ATES, OTSE, VIS-ATSE compatible power strip kit for France and Austria
ATSE-PS-DE	ATES, OTSE, VIS-ATSE compatible power strip kit for Germany
ATSE-PS-UK	ATES, OTSE, VIS-ATSE compatible power strip kit for England
ATSE-PS-JP	ATES, OTSE, VIS-ATSE compatible power strip kit for Japan
ATSE-PS-CN	ATES, OTSE, VIS-ATSE compatible power strip kit for China
ATSE-PS-IN	ATES, OTSE, VIS-ATSE compatible power strip kit for India
ATSE-PS-IL	ATES, OTSE, VIS-ATSE compatible power strip kit for Israel
ATSE-PS-IT	ATES, OTSE, VIS-ATSE compatible power strip kit for Italy
INT-C	Caster Upgrade Kit, includes 4 Casters, Integrity VCS System

See all these accessories on Search Integrity VCS



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Newport Corporation, Irvine and Santa Clara, California and Franklin, Massachusetts;  
Evry and Beaune-La-Rolande, France; Stahnsdorf, Germany and Wuxi, China have  
all been certified compliant with ISO 9001 by the British Standards Institution.

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