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SAS Inc.
Spring Analysis Systems
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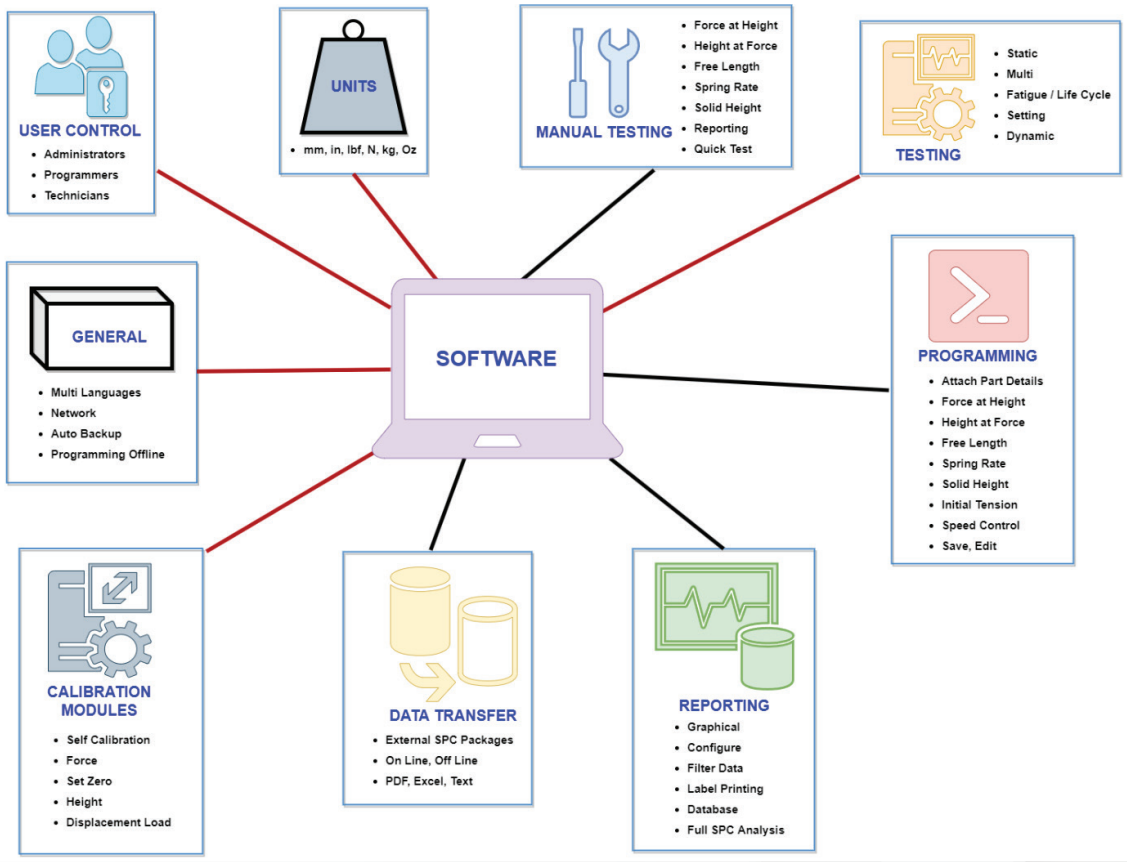
SAS CT-10

10N / 2.25LBF CAPACITY
C-FRAME COMPRESSION/EXTENSION SPRING TESTER
SERVO DRIVEN, PC CONTROLLED

Standard Model HS Model

SPECIFICATIONS

Load	Recommended Load Capacity 10N (2.25lbf)
	Recommended Minimum test load 0.05N (.01125lbf)
	Load Resolution 0.0002N (000045lbf)
	Load Accuracy per ISO 7500 /1 Class 0.5 (0.5% of load, between 0.5% capacity up to full capacity)
	Continuous digital display or Force/Load height graphical analysis tools and display
	Safe overload to 150% of FS (compression and tension overload protection at 100% of FS load)
Stroke	Stroke 200mm (8”) Standard
	500mm (20”) Optional for Standard Model
	500mm (20”) HS Model
	1000mm(40”) Optional for HS Model
	Resolution: 0.003mm (0.0002”) for 200 stroke, - Standard Model
	Resolution: 0.008mm (0.0005”) for 500mm stroke –Optional for Standard Model
	Resolution: 0.00025mm (0.0000098”) for 500mm and 1000mm stroke –HS Model
	Accuracy: ±0.02mm (±0.0008”) for 200 stroke on standard model , Accuracy: ±0.04mm (±0.0015”) for 500mm standard model optional stroke. Absolute display of load height above a user defined fixed reference.
	Accuracy: ±0.01mm (±0.00039”) for 500 stroke for HS Model, Accuracy: better than 0.005mm– Available with independent Calibration for HS Model
Test Speeds	1.5mm/s – 15mm/s (3.5”/min – 35.5”/min)
	4 distinct speed settings available Standard Model
	0.1mm/s – 125mm/s (0.236”/min-295.3”/min) HS Model
	12 distinct speed settings available HS Model
Software Features	



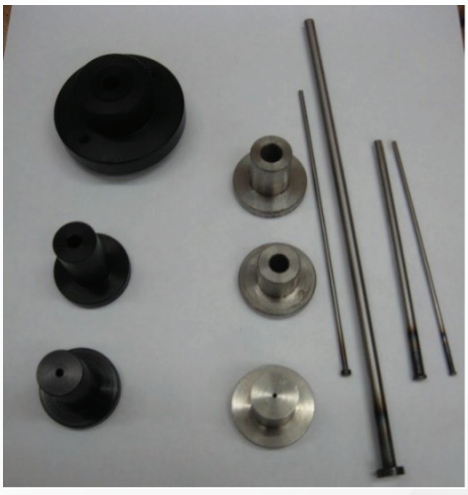
SPECIFICATIONS

Platten Diameter	55mm (2.2”)
User Interface	SAS software is included with the purchase of the tester. The buyer can purchase the computer from SAS or supply their own. If the buyer supplies their own User Interface SAS will remote into the computer and install the SAS software

OPTIONS

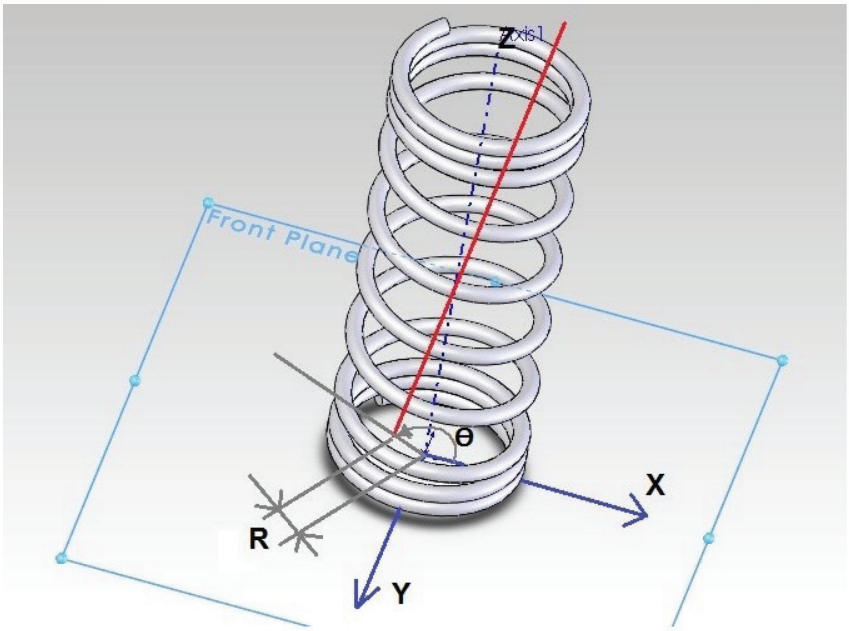
Computer *(Optional)*	Intel Dual Core (minimum) processor Serial or USB connection to PC for control and data transfer Fully Microsoft Windows 11 compatible Display 17” Monitor
Dimensional Measurement Software with 150mm Mitutoyo Caliper *(Optional)*	Add dimensional measurement to Spring Force Data on a single combined report.

Buckling Prevention Pins and Fixtures *(Optional)*	Allows the safe testing of springs that are flimsy or tend to buckle.



OPTIONS

Conductive Free Length *(Optional)*	Conductive Free Length (CFL) sensing utilizes a digital input connected directly to the servo controller to determine the spring free length by electrical conduction using a 3.5kHz sampling rate. When measured by CFL the results are independent of the spring rate which provides a highly accurate measurement at a 10X speed versus the standard force sensing method. The tested spring must be both electrically conductive and free of scale, oil, or dirt.
Load Vector Module *(Optional)*	A module designed to measure side loads, in plane, and out of plane forces acting on a spring. Vector analysis of the Spring Forces. Available for 500N models and larger.



FORCES MEASURED BY LVA UNIT

Fn	Axial Vertical Forces measured on standard loadcells
SULx	Force in the X in-plane direction.
SULy	Force in the Y in-plane direction.
SULr	Resultant force in the XY plane.
SULrp	XY plane vector pierce point as a radius from the part center (polar coordinate).
SULΘp	XY plane angle to pierce point (polar coordinate – refer to SULrp).
SULxz	Angle of the force vector projected onto the XZ plane
SULyz	Angle of the force vector projected onto the YZ plane.

SPECIFICATIONS

Dimensions	**Standard Model** 25 x 50 x 60 cm (10” x 20” x 23.6”) Weight 25 kg (55lbf)	**HS Model** 25 x 50 x 95 cm (10” x 20” x 37.4”) Weight 40 kg (88lbf)
Power	110V~220V AC 4A (Maximum)	

Gibraltar Corporation

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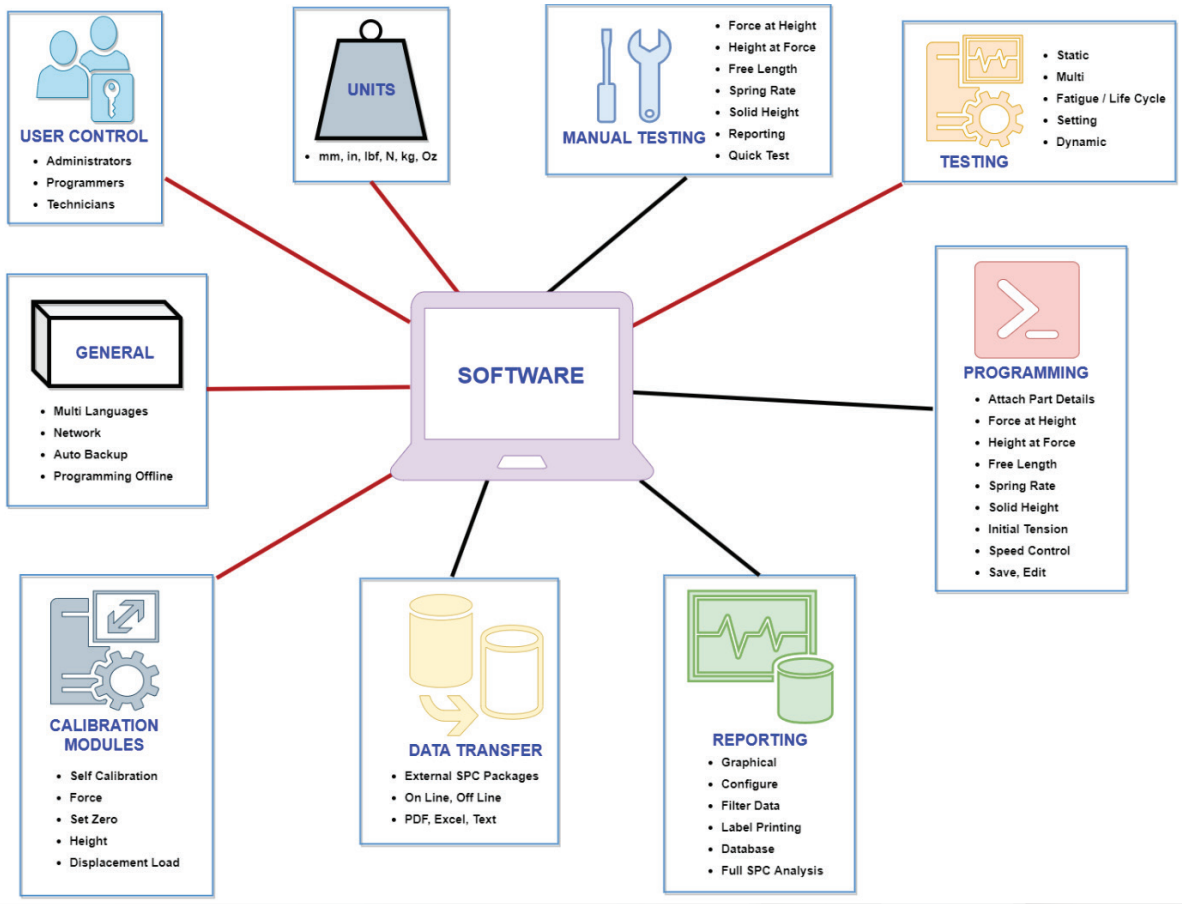
SAS CT-50

50N / 11.21LBF CAPACITY
C-FRAME COMPRESSION/EXTENSION SPRING TESTER
SERVO DRIVEN, PC CONTROLLED

Standard Model HS Model

SPECIFICATIONS

Load	Recommended Load Capacity 50N (11.21lbf)
	Recommended Minimum test load 0.25N (.056lbf)
	Load Resolution 0.001N (0.000225lbf)
	Load Accuracy at 0.5% of Range ±0.00125N (±0.000280lbf)
	Continuous digital display or Force/Load height graphical analysis tools and display
	Safe overload to 150% of FS (compression and tension overload protection at 100% of FS load)
Stroke	Stroke 200mm (8”) Standard
	500mm (20”) Optional for Standard Model
	500mm (20”) HS Model
	1000mm(40”) Optional for HS Model
	Resolution: 0.003mm (0.0002”) for 200 stroke, - Standard Model
	Resolution: 0.008mm (0.0005”) for 500mm stroke –Optional for Standard Model
	Resolution: 0.00025mm (0.0000098”) for 500mm and 1000mm stroke –HS Model
	Accuracy: ±0.02mm (±0.0008”) for 200 stroke on standard model , Accuracy: ±0.04mm (±0.0015”) for 500mm standard model optional stroke. Absolute display of load height above a user defined fixed reference.
	Accuracy: ±0.01mm (±0.00039”) for 500 stroke for HS Model, Accuracy: better than 0.005mm– Available with independent Calibration for HS Model
Test Speeds	1.5mm/s – 15mm/s (3.5”/min – 35.5”/min)
	4 distinct speed settings available Standard Model
	0.1mm/s – 125mm/s (0.236”/min-295.3”/min) HS Model
	12 distinct speed settings available HS Model
Software Features	

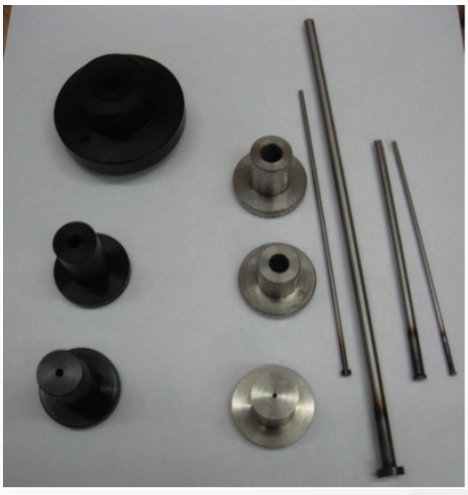
SPECIFICATIONS

Platten Diameter	55mm (2.2”)
User Interface	SAS software is included with the purchase of the tester. The buyer can purchase the computer from SAS or supply their own. If the buyer supplies their own User Interface SAS will remote into the computer and install the SAS software

OPTIONS

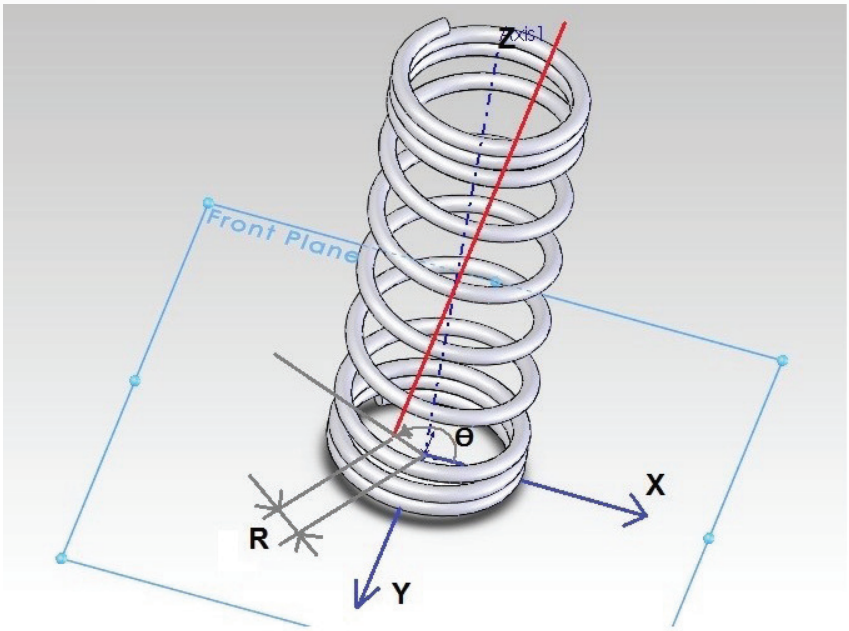
Computer *(Optional)*	Intel Dual Core (minimum) processor Serial or USB connection to PC for control and data transfer Fully Microsoft Windows 11 compatible Display 17” Monitor
Dimensional Measurement Software with 150mm Mitutoyo Caliper *(Optional)*	Add dimensional measurement to Spring Force Data on a single combined report.

Buckling Prevention Pins and Fixtures *(Optional)*	Allows the safe testing of springs that are flimsy or tend to buckle.



OPTIONS

Conductive Free Length *(Optional)*	Conductive Free Length (CFL) sensing utilizes a digital input connected directly to the servo controller to determine the spring free length by electrical conduction using a 3.5kHz sampling rate. When measured by CFL the results are independent of the spring rate which provides a highly accurate measurement at a 10X speed versus the standard force sensing method. The tested spring must be both electrically conductive and free of scale, oil, or dirt.
Load Vector Module *(Optional)*	A module designed to measure side loads, in plane, and out of plane forces acting on a spring. Vector analysis of the Spring Forces. Available for 500N models and larger.



FORCES MEASURED BY LVA UNIT

Fn	Axial Vertical Forces measured on standard loadcells
SULx	Force in the X in-plane direction.
SULy	Force in the Y in-plane direction.
SULr	Resultant force in the XY plane.
SULrp	XY plane vector pierce point as a radius from the part center (polar coordinate).
SULΘp	XY plane angle to pierce point (polar coordinate – refer to SULrp).
SULxz	Angle of the force vector projected onto the XZ plane
SULyz	Angle of the force vector projected onto the YZ plane.

SPECIFICATIONS

Dimensions	**Standard Model** 25 x 50 x 60 cm (10” x 20” x 23.6”) Weight 25 kg (55lbf)	**HS Model** 25 x 50 x 95 cm (10” x 20” x 37.4”) Weight 40 kg (88lbf)
Power	110V~220V AC 4A (Maximum)	

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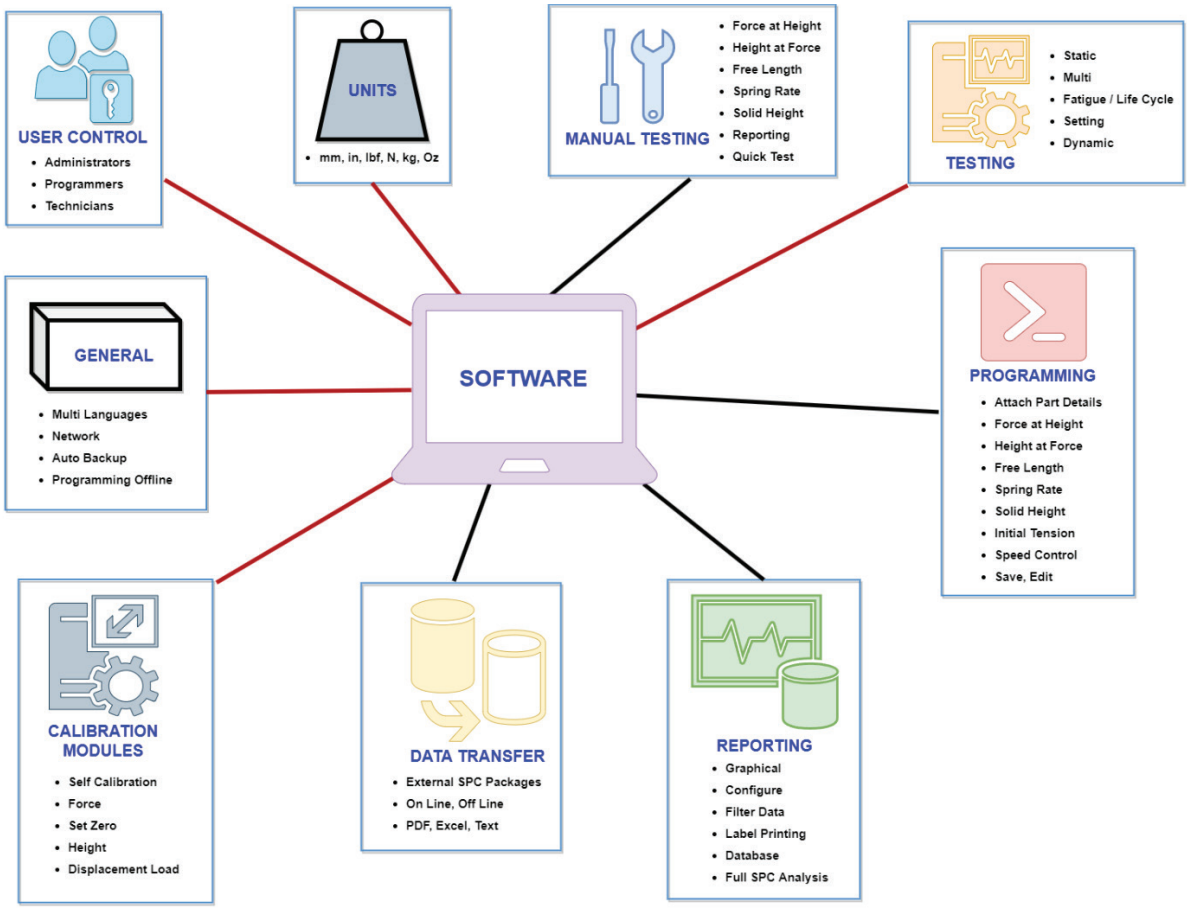
SAS CT-100

100N / 22.5LBF CAPACITY
C-FRAME COMPRESSION/EXTENSION SPRING TESTER
SERVO DRIVEN, PC CONTROLLED

Standard Model HS Model

SPECIFICATIONS

Load	Recommended Load Capacity 100N (22.5lbf)
	Recommended Minimum test load 0.50N (0.1125lbf)
	Load Resolution 0.002N (0.00045lbf)
	Load Accuracy per ISO 7500 /1 Class 0.5 (0.5% of load, between 0.5% capacity up to full capacity)
	Continuous digital display or Force/Load height graphical analysis tools and display
	Safe overload to 150% of FS (compression and tension overload protection at 100% of FS load)
Stroke	Stroke 200mm (8”) Standard
	500mm (20”) Optional for Standard Model
	500mm (20”) HS Model
	1000mm(40”) Optional for HS Model
	Resolution: 0.003mm (0.0002”) for 200 stroke, - Standard Model
	Resolution: 0.008mm (0.0005”) for 500mm stroke –Optional for Standard Model
	Resolution: 0.00025mm (0.0000098”) for 500mm and 1000mm stroke –HS Model
	Accuracy: ±0.02mm (±0.0008”) for 200 stroke on standard model , Accuracy: ±0.04mm (±0.0015”) for 500mm standard model optional stroke. Absolute display of load height above a user defined fixed reference.
	Accuracy: ±0.01mm (±0.00039”) for 500 stroke for HS Model, Accuracy: better than 0.005mm– Available with independent Calibration for HS Model
Test Speeds	1.5mm/s – 15mm/s (3.5”/min – 35.5”/min)
	4 distinct speed settings available Standard Model
	0.1mm/s – 125mm/s (0.236”/min-295.3”/min) HS Model
	12 distinct speed settings available HS Model
Software Features	

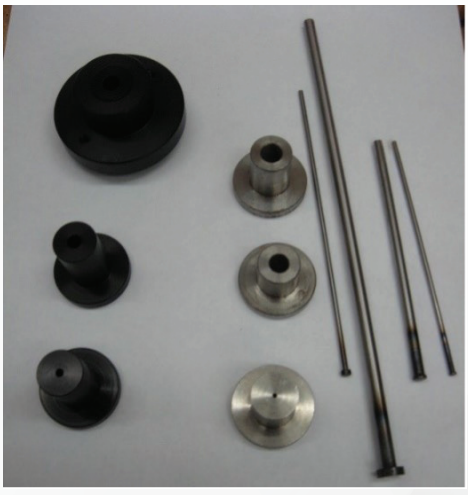
SPECIFICATIONS

Platten Diameter	55mm (2.2”)
User Interface	SAS software is included with the purchase of the tester. The buyer can purchase the computer from SAS or supply their own. If the buyer supplies their own User Interface SAS will remote into the computer and install the SAS software

OPTIONS

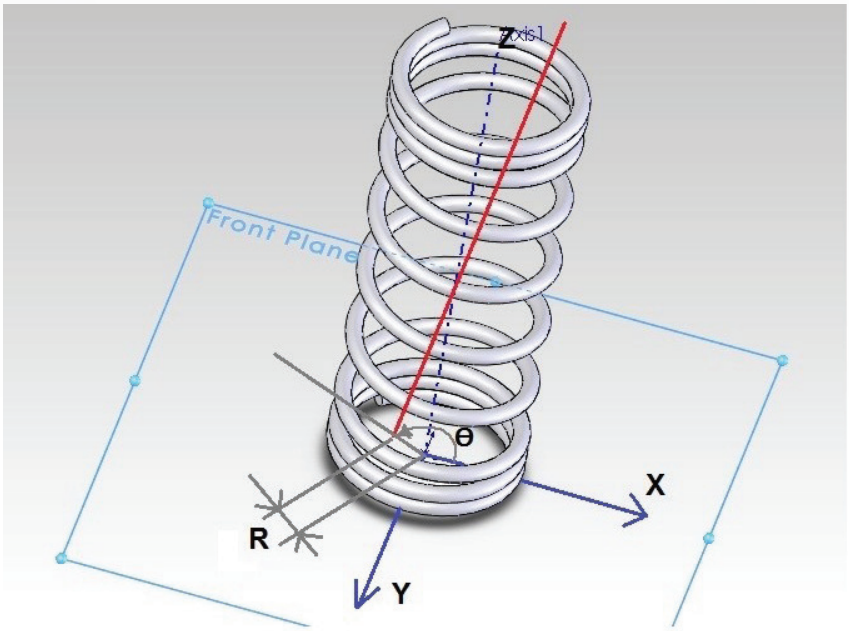
Computer *(Optional)*	Intel Dual Core (minimum) processor Serial or USB connection to PC for control and data transfer Fully Microsoft Windows 11 compatible Display 17” Monitor
Dimensional Measurement Software with 150mm Mitutoyo Caliper *(Optional)*	Add dimensional measurement to Spring Force Data on a single combined report.

Buckling Prevention Pins and Fixtures *(Optional)*	Allows the safe testing of springs that are flimsy or tend to buckle.



OPTIONS

Conductive Free Length *(Optional)*	Conductive Free Length (CFL) sensing utilizes a digital input connected directly to the servo controller to determine the spring free length by electrical conduction using a 3.5kHz sampling rate. When measured by CFL the results are independent of the spring rate which provides a highly accurate measurement at a 10X speed versus the standard force sensing method. The tested spring must be both electrically conductive and free of scale, oil, or dirt.
Load Vector Module *(Optional)*	A module designed to measure side loads, in plane, and out of plane forces acting on a spring. Vector analysis of the Spring Forces. Available for 500N models and larger.



FORCES MEASURED BY LVA UNIT

Fn	Axial Vertical Forces measured on standard loadcells
SULx	Force in the X in-plane direction.
SULy	Force in the Y in-plane direction.
SULr	Resultant force in the XY plane.
SULrp	XY plane vector pierce point as a radius from the part center (polar coordinate).
SULΘp	XY plane angle to pierce point (polar coordinate – refer to SULrp).
SULxz	Angle of the force vector projected onto the XZ plane
SULyz	Angle of the force vector projected onto the YZ plane.

SPECIFICATIONS

	Standard Model	**HS Model**
Dimensions	25 x 50 x 60 cm (10” x 20” x 23.6”) Weight 25 kg (55lbf)	25 x 50 x 95 cm (10” x 20” x 37.4”) Weight 40 kg (88lbf)
Power	110V~220V AC 4A (Maximum)	

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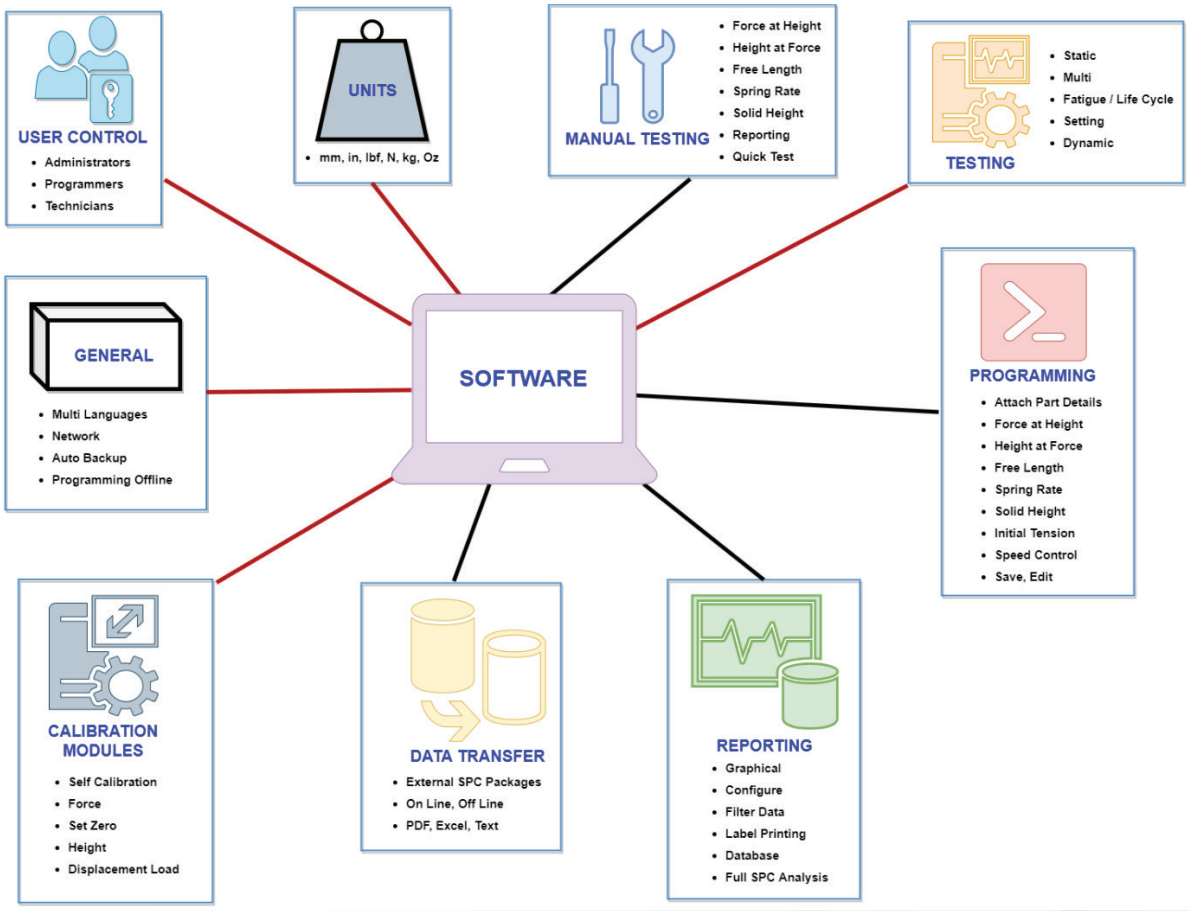
SAS CT-200

200N / 45.0LBF CAPACITY
C-FRAME COMPRESSION/EXTENSION SPRING TESTER
SERVO DRIVEN, PC CONTROLLED

Standard Model HS Model

SPECIFICATIONS

Load	Recommended Load Capacity 200N (45.0lbf)
	Recommended Minimum test load 1.0N (0.225lbf)
	Load Resolution 0.004N (0.00090lbf)
	Load Accuracy per ISO 7500 /1 Class 0.5 (0.5% of load, between 0.5% capacity up to full capacity)
	Continuous digital display or Force/Load height graphical analysis tools and display
	Safe overload to 150% of FS (compression and tension overload protection at 100% of FS load)
Stroke	Stroke 200mm (8”) Standard
	500mm (20”) Optional for Standard Model
	500mm (20”) HS Model
	1000mm(40”) Optional for HS Model
	Resolution: 0.003mm (0.0002”) for 200 stroke, - Standard Model
	Resolution: 0.008mm (0.0005”) for 500mm stroke –Optional for Standard Model
	Resolution: 0.00025mm (0.0000098”) for 500mm and 1000mm stroke –HS Model
	Accuracy: ±0.02mm (±0.0008”) for 200 stroke on standard model , Accuracy: ±0.04mm (±0.0015”) for 500mm standard model optional stroke. Absolute display of load height above a user defined fixed reference.
	Accuracy: ±0.01mm (±0.00039”) for 500 stroke for HS Model, Accuracy: better than 0.005mm– Available with independent Calibration for HS Model
Test Speeds	1.5mm/s – 15mm/s (3.5”/min – 35.5”/min)
	4 distinct speed settings available Standard Model
	0.1mm/s – 125mm/s (0.236”/min-295.3”/min) HS Model
	12 distinct speed settings available HS Model
Software Features	



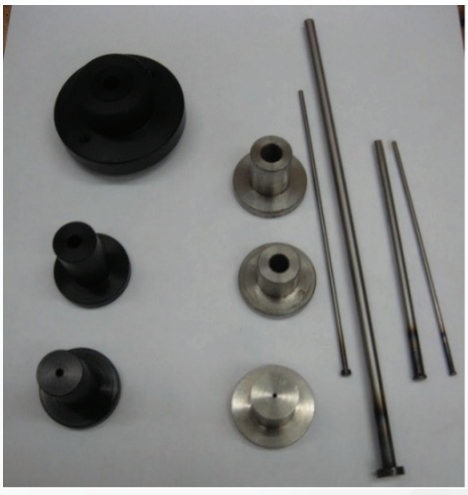
SPECIFICATIONS

Platten Diameter	55mm (2.2”)
User Interface	SAS software is included with the purchase of the tester. The buyer can purchase the computer from SAS or supply their own. If the buyer supplies their own User Interface SAS will remote into the computer and install the SAS software

OPTIONS

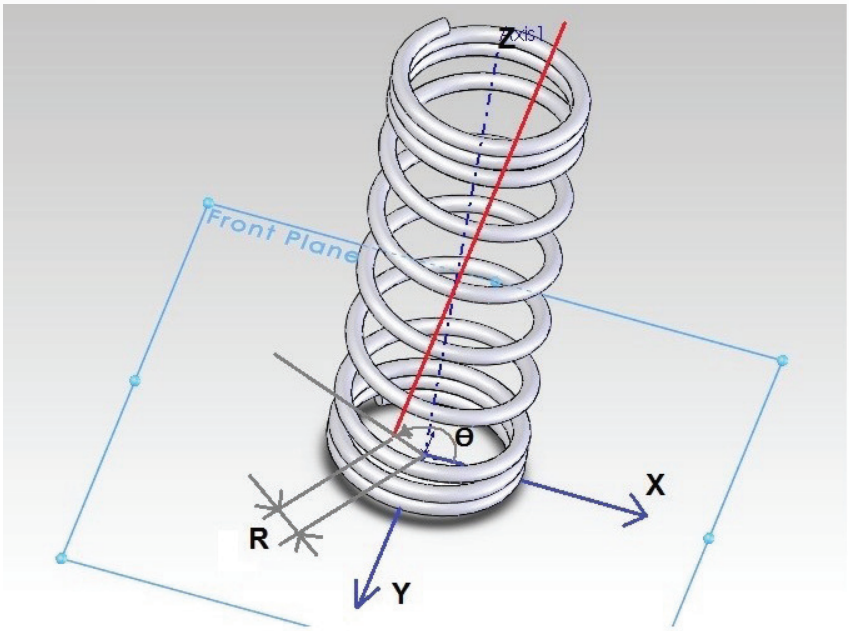
Computer *(Optional)*	Intel Dual Core (minimum) processor Serial or USB connection to PC for control and data transfer Fully Microsoft Windows 11 compatible Display 17” Monitor
Dimensional Measurement Software with 150mm Mitutoyo Caliper *(Optional)*	Add dimensional measurement to Spring Force Data on a single combined report.

Buckling Prevention Pins and Fixtures *(Optional)*	Allows the safe testing of springs that are flimsy or tend to buckle.



OPTIONS

Conductive Free Length *(Optional)*	Conductive Free Length (CFL) sensing utilizes a digital input connected directly to the servo controller to determine the spring free length by electrical conduction using a 3.5kHz sampling rate. When measured by CFL the results are independent of the spring rate which provides a highly accurate measurement at a 10X speed versus the standard force sensing method. The tested spring must be both electrically conductive and free of scale, oil, or dirt.
Load Vector Module *(Optional)*	A module designed to measure side loads, in plane, and out of plane forces acting on a spring. Vector analysis of the Spring Forces. Available for 500N models and larger.



FORCES MEASURED BY LVA UNIT

Fn	Axial Vertical Forces measured on standard loadcells
SULx	Force in the X in-plane direction.
SULy	Force in the Y in-plane direction.
SULr	Resultant force in the XY plane.
SULrp	XY plane vector pierce point as a radius from the part center (polar coordinate).
SULΘp	XY plane angle to pierce point (polar coordinate – refer to SULrp).
SULxz	Angle of the force vector projected onto the XZ plane
SULyz	Angle of the force vector projected onto the YZ plane.

SPECIFICATIONS

	Standard Model	**HS Model**
Dimensions	25 x 50 x 60 cm (10” x 20” x 23.6”) Weight 25 kg (55lbf)	25 x 50 x 95 cm (10” x 20” x 37.4”) Weight 40 kg (88lbf)
Power	110V~220V AC 4A (Maximum)	

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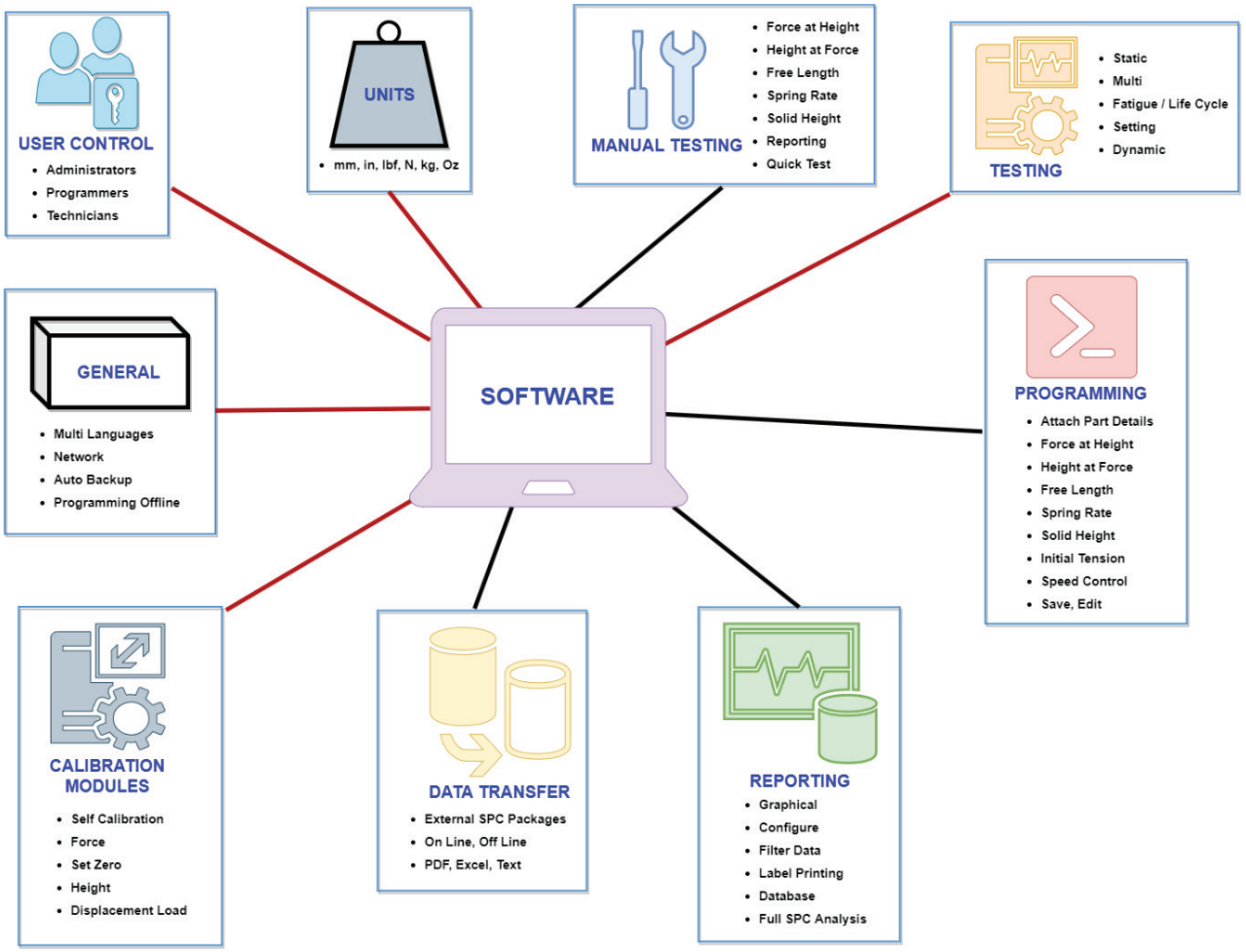
SAS CT-500

500N / 112.1LBF CAPACITY
C-FRAME COMPRESSION/EXTENSION SPRING TESTER
SERVO DRIVEN, PC CONTROLLED

Standard Model HS Model

SPECIFICATIONS

Load	Recommended Load Capacity 500N (112.1lbf)
	Recommended Minimum test load 2.5N (0.5605lbf))
	Load Resolution 0.001N (0.00225lbf)
	Load Accuracy per ISO 7500 /1 Class 0.5 (0.5% of load, between 0.5% capacity up to full capacity)
	Continuous digital display or Force/Load height graphical analysis tools and display
	Safe overload to 150% of FS (compression and tension overload protection at 100% of FS load)
Stroke	Stroke 200mm (8”) Standard
	500mm (20”) Optional for Standard Model
	500mm (20”) HS Model
	1000mm(40”) Optional for HS Model
	Resolution: 0.003mm (0.0002”) for 200 stroke, - Standard Model
	Resolution: 0.008mm (0.0005”) for 500mm stroke –Optional for Standard Model
	Resolution: 0.00025mm (0.0000098”) for 500mm and 1000mm stroke –HS Model
	Accuracy: ±0.02mm (±0.0008”) for 200 stroke on standard model , Accuracy: ±0.04mm (±0.0015”) for 500mm standard model optional stroke. Absolute display of load height above a user defined fixed reference.
	Accuracy: ±0.01mm (±0.00039”) for 500 stroke for HS Model, Accuracy: better than 0.005mm– Available with independent Calibration for HS Model
Test Speeds	1.5mm/s - 15mm/s (3.5”/min – 35.5”/min), 4 distinct speed settings available Standard Model
	0.1mm/s - 125mm/s (0.236”/min-295.3”/min) HS Model, 12 distinct speed settings available HS Model
Software Features	



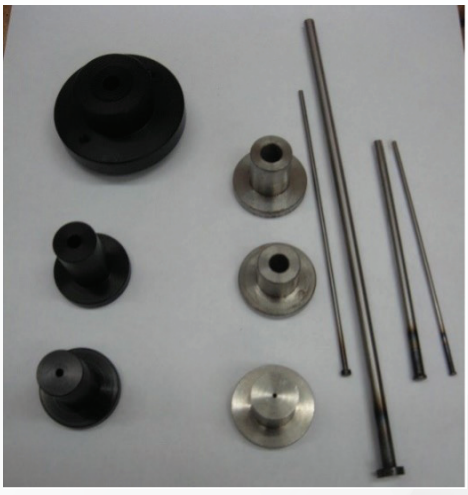
SPECIFICATIONS

Platten Diameter	55mm (2.2”)
User Interface	SAS software is included with the purchase of the tester. The buyer can purchase the computer from SAS or supply their own. If the buyer supplies their own User Interface SAS will remote into the computer and install the SAS software

OPTIONS

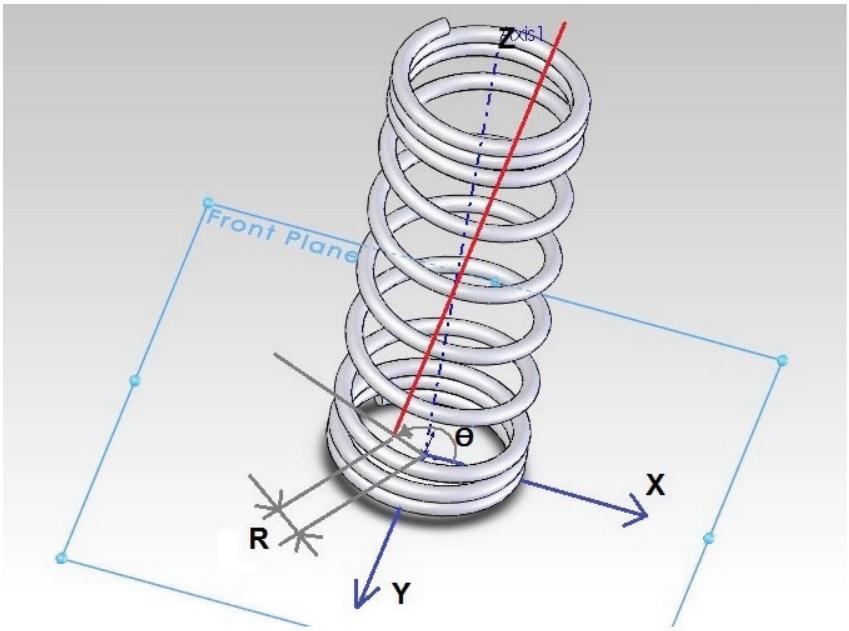
Computer *(Optional)*	Intel Dual Core (minimum) processor Serial or USB connection to PC for control and data transfer Fully Microsoft Windows 11 compatible Display 17” Monitor
Dimensional Measurement Software with 150mm Mitutoyo Caliper *(Optional)*	Add dimensional measurement to Spring Force Data on a single combined report.

Buckling Prevention Pins and Fixtures *(Optional)*	Allows the safe testing of springs that are flimsy or tend to buckle.



OPTIONS

Conductive Free Length *(Optional)*	Conductive Free Length (CFL) sensing utilizes a digital input connected directly to the servo controller to determine the spring free length by electrical conduction using a 3.5kHz sampling rate. When measured by CFL the results are independent of the spring rate which provides a highly accurate measurement at a 10X speed versus the standard force sensing method. The tested spring must be both electrically conductive and free of scale, oil, or dirt.
Load Vector Module *(Optional)*	A module designed to measure side loads, in plane, and out of plane forces acting on a spring. Vector analysis of the Spring Forces. Available for 500N models and larger.



FORCES MEASURED BY LVA UNIT

Fn	Axial Vertical Forces measured on standard loadcells
SULx	Force in the X in-plane direction.
SULy	Force in the Y in-plane direction.
SULr	Resultant force in the XY plane.
SULrp	XY plane vector pierce point as a radius from the part center (polar coordinate).
SULΘp	XY plane angle to pierce point (polar coordinate – refer to SULrp).
SULxz	Angle of the force vector projected onto the XZ plane
SULyz	Angle of the force vector projected onto the YZ plane.

SPECIFICATIONS

Dimensions	**Standard Model** 25 x 50 x 60 cm (10” x 20” x 23.6”) Weight 25 kg (55lbf)	**HS Model** 25 x 50 x 95 cm (10” x 20” x 37.4”) Weight 40 kg (88lbf)
Power	110V~220V AC 4A (Maximum)	

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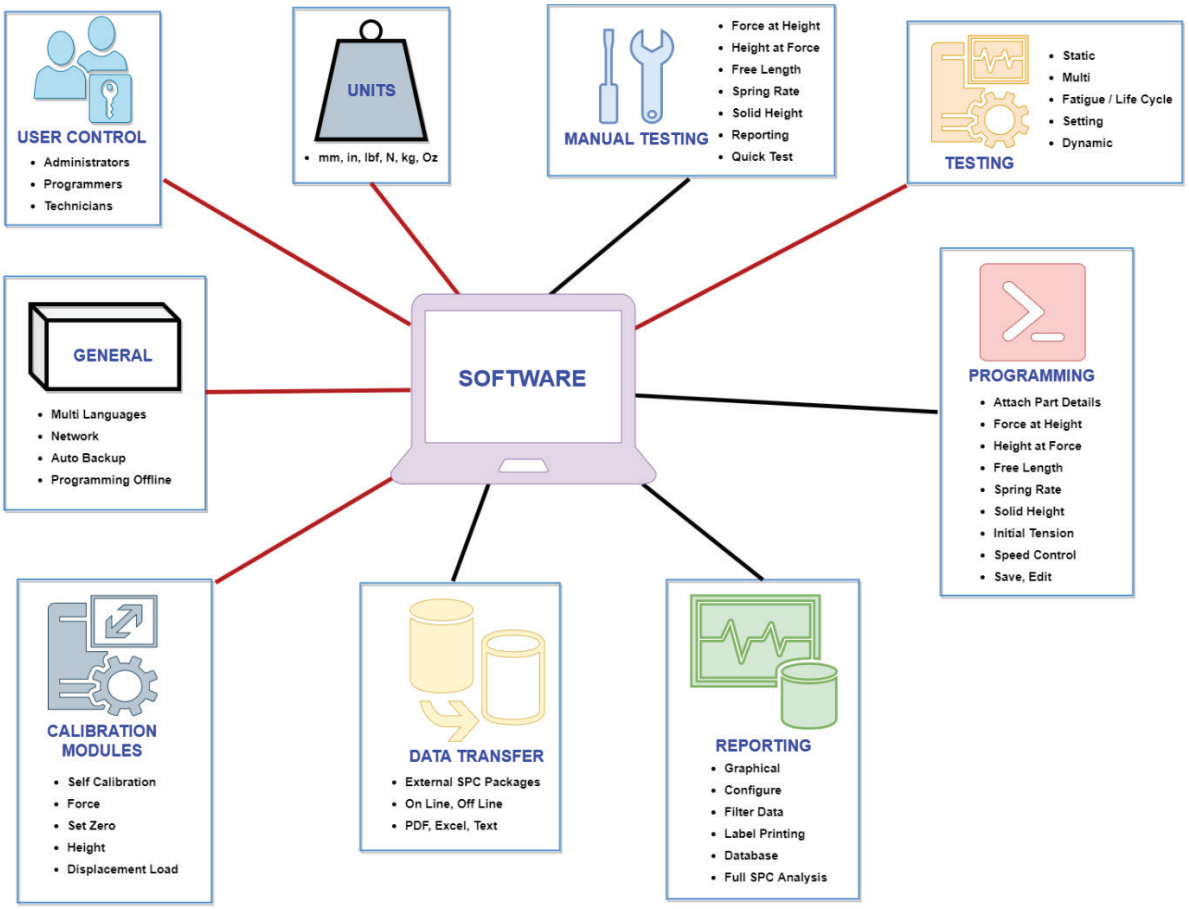
SAS CT-2000

2000N / 450.0LBF CAPACITY
C-FRAME COMPRESSION/EXTENSION SPRING TESTER
SERVO DRIVEN, PC CONTROLLED

Standard/HS Model

SPECIFICATIONS

Load	Recommended Load Capacity 2000N (450.0lbf)
	Recommended Minimum test load 10.0N (2.25lbf)
	Load Resolution 0.04N (0.0090lbf)
	Load Accuracy per ISO 7500 /1 Class 0.5 (0.5% of load, between 0.5% capacity up to full capacity)
	Continuous digital display or Force/Load height graphical analysis tools and display
	Safe overload to 150% of FS (compression and tension overload protection at 100% of FS load)
Stroke	Stroke 200mm (8”) Standard
	500mm (20”) Optional for Standard Model
	500mm (20”) HS Model
	1000mm(40”) Optional for HS Model
	Resolution: 0.003mm (0.0002”) for 200 stroke, - Standard Model
	Resolution: 0.008mm (0.0005”) for 500mm stroke –Optional for Standard Model
	Resolution: 0.00025mm (0.0000098”) for 500mm and 1000mm stroke –HS Model
	Accuracy: ±0.02mm (±0.0008”) for 200 stroke on standard model , Accuracy: ±0.04mm (±0.0015”) for 500mm standard model optional stroke. Absolute display of load height above a user defined fixed reference.
	Accuracy: ±0.01mm (±0.00039”) for 500 stroke for HS Model, Accuracy: better than 0.005mm– Available with independent Calibration for HS Model
Test Speeds	1.5mm/s – 15mm/s (3.5”/min – 35.5”/min)
	4 distinct speed settings available Standard Model
	0.1mm/s – 125mm/s (0.236”/min-295.3”/min) HS Model
	12 distinct speed settings available HS Model
Software Features	

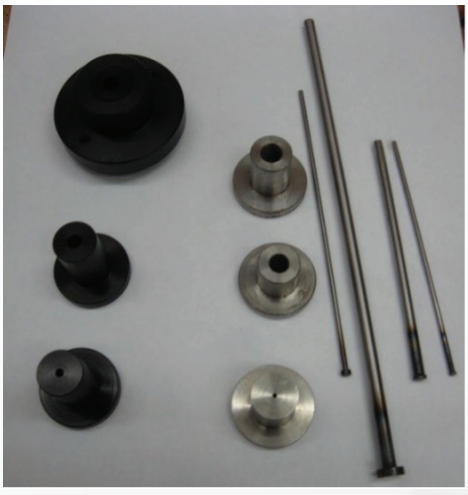
SPECIFICATIONS

Platten Diameter	55mm (2.2”)
User Interface	SAS software is included with the purchase of the tester. The buyer can purchase the computer from SAS or supply their own. If the buyer supplies their own User Interface SAS will remote into the computer and install the SAS software

OPTIONS

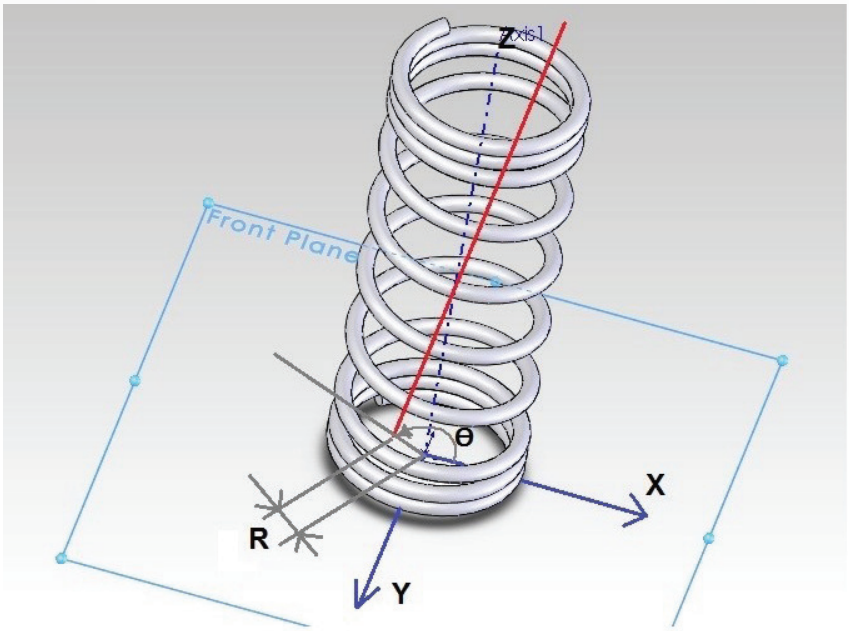
Computer *(Optional)*	Intel Dual Core (minimum) processor Serial or USB connection to PC for control and data transfer Fully Microsoft Windows 11 compatible Display 17” Monitor
Dimensional Measurement Software with 150mm Mitutoyo Caliper *(Optional)*	Add dimensional measurement to Spring Force Data on a single combined report.

Buckling Prevention Pins and Fixtures *(Optional)*	Allows the safe testing of springs that are flimsy or tend to buckle.



OPTIONS

Conductive Free Length *(Optional)*	Conductive Free Length (CFL) sensing utilizes a digital input connected directly to the servo controller to determine the spring free length by electrical conduction using a 3.5kHz sampling rate. When measured by CFL the results are independent of the spring rate which provides a highly accurate measurement at a 10X speed versus the standard force sensing method. The tested spring must be both electrically conductive and free of scale, oil, or dirt.
Load Vector Module *(Optional)*	A module designed to measure side loads, in plane, and out of plane forces acting on a spring. Vector analysis of the Spring Forces. Available for 500N models and larger.



FORCES MEASURED BY LVA UNIT

Fn	Axial Vertical Forces measured on standard loadcells
SULx	Force in the X in-plane direction.
SULy	Force in the Y in-plane direction.
SULr	Resultant force in the XY plane.
SULrp	XY plane vector pierce point as a radius from the part center (polar coordinate).
SULΘp	XY plane angle to pierce point (polar coordinate – refer to SULrp).
SULxz	Angle of the force vector projected onto the XZ plane
SULyz	Angle of the force vector projected onto the YZ plane.

SPECIFICATIONS

	Standard Model	**HS Model**
Dimensions	32 x 58 x 105 cm (12.6” x 23” x 41.4”) Weight 45 kg (99lbf)	32 x 58 x 105 cm (12.6” x 23” x 41.4”) Weight 45 kg (99lbf)
Power	110V~220V AC 6A (Maximum)	

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SAS Inc.
Spring Analysis Systems
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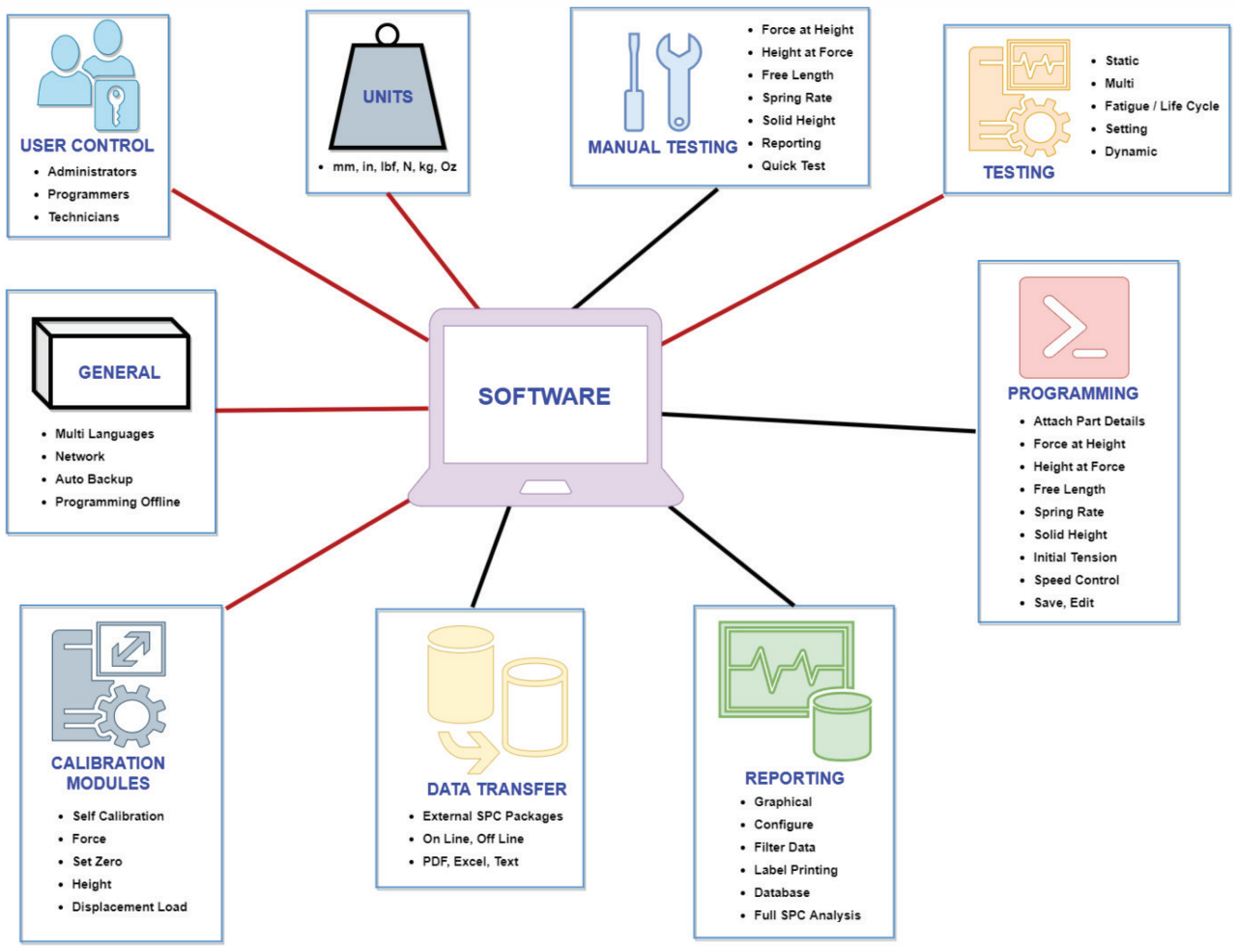
SAS CT-5000HS

5000N / 1128.0LBF CAPACITY
C-FRAME, SERVO DRIVEN, PC CONTROLLED

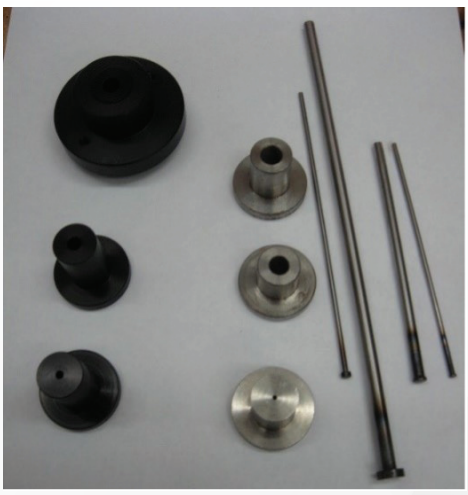
SPECIFICATIONS

Load	Recommended Load Capacity 5000N (1128.0lbf)
	Recommended Minimum test load 25.0N (5.64lbf)
	Load Resolution 0.10N (0.0224lbf)
	Load Accuracy per ISO 7500 /1 Class 0.5 (0.5% of load, between 0.5% capacity up to full capacity)
	Continuous digital display or Force/Load height graphical analysis tools and display
	Safe overload to 150% of FS (compression and tension overload protection at 100% of FS load)
Stroke	Stroke 500mm (20”)
	1000mm(40”) Optional
	Resolution: 0.00025mm (0.0000098”)
	Accuracy: ±0.04mm (±0.0015”) for 500mm stroke on Standard Models. Absolute display of load height above a user defined fixed reference.
	Accuracy: ±0.01mm (±0.00039”) Accuracy: better than 0.005mm– Available with independent Calibration
Test Speeds	0.1mm/s – 125mm/s (0.236”/min-295.3”/min)
	12 distinct speed settings available
Software Features	

SPECIFICATIONS

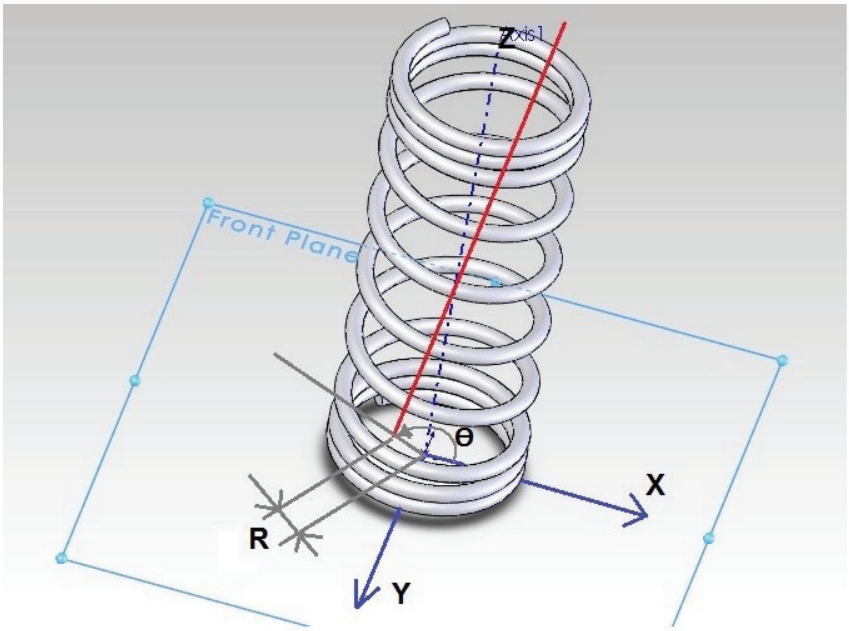
Platten Diameter	120mm (4.7”)
User Interface	SAS software is included with the purchase of the tester. The buyer can purchase the computer from SAS or supply their own. If the buyer supplies their own User Interface SAS will remote into the computer and install the SAS software

OPTIONS

Computer *(Optional)*	Intel Dual Core (minimum) processor Serial or USB connection to PC for control and data transfer Fully Microsoft Windows 11 compatible Display 17” Monitor
Dimensional Measurement Software with 150mm Mitutoyo Caliper *(Optional)*	Add dimensional measurement to Spring Force Data on a single combined report. 
Buckling Prevention Pins and Fixtures *(Optional)*	Allows the safe testing of springs that are flimsy or tend to buckle.  

OPTIONS

Conductive Free Length *(Optional)*	Conductive Free Length (CFL) sensing utilizes a digital input connected directly to the servo controller to determine the spring free length by electrical conduction using a 3.5kHz sampling rate. When measured by CFL the results are independent of the spring rate which provides a highly accurate measurement at a 10X speed versus the standard force sensing method. The tested spring must be both electrically conductive and free of scale, oil, or dirt.
Load Vector Module *(Optional)*	A module designed to measure side loads, in plane, and out of plane forces acting on a spring. Vector analysis of the Spring Forces. Available for 500N models and larger.



FORCES MEASURED BY LVA UNIT

Fn	Axial Vertical Forces measured on standard loadcells
SULx	Force in the X in-plane direction.
SULy	Force in the Y in-plane direction.
SULr	Resultant force in the XY plane.
SULrp	XY plane vector pierce point as a radius from the part center (polar coordinate).
SULΘp	XY plane angle to pierce point (polar coordinate – refer to SULrp).
SULxz	Angle of the force vector projected onto the XZ plane
SULyz	Angle of the force vector projected onto the YZ plane.

SPECIFICATIONS

Dimensions	**HS Model** 32 x 70 x 115 cm (12.6” x 27.5” x 45.2”) Weight 200 kg (440lbf)
Power	110V~220V AC 9A (Maximum)

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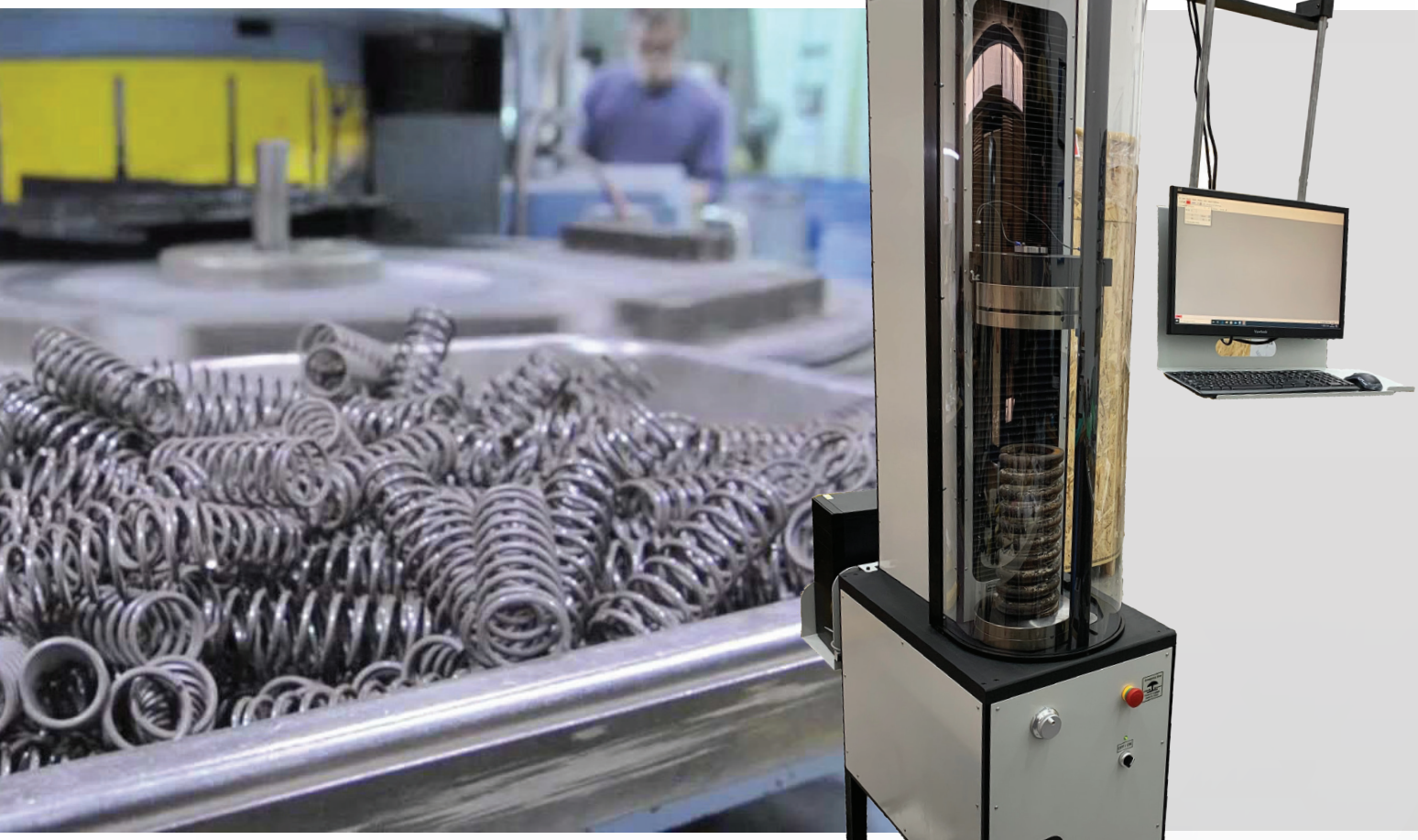
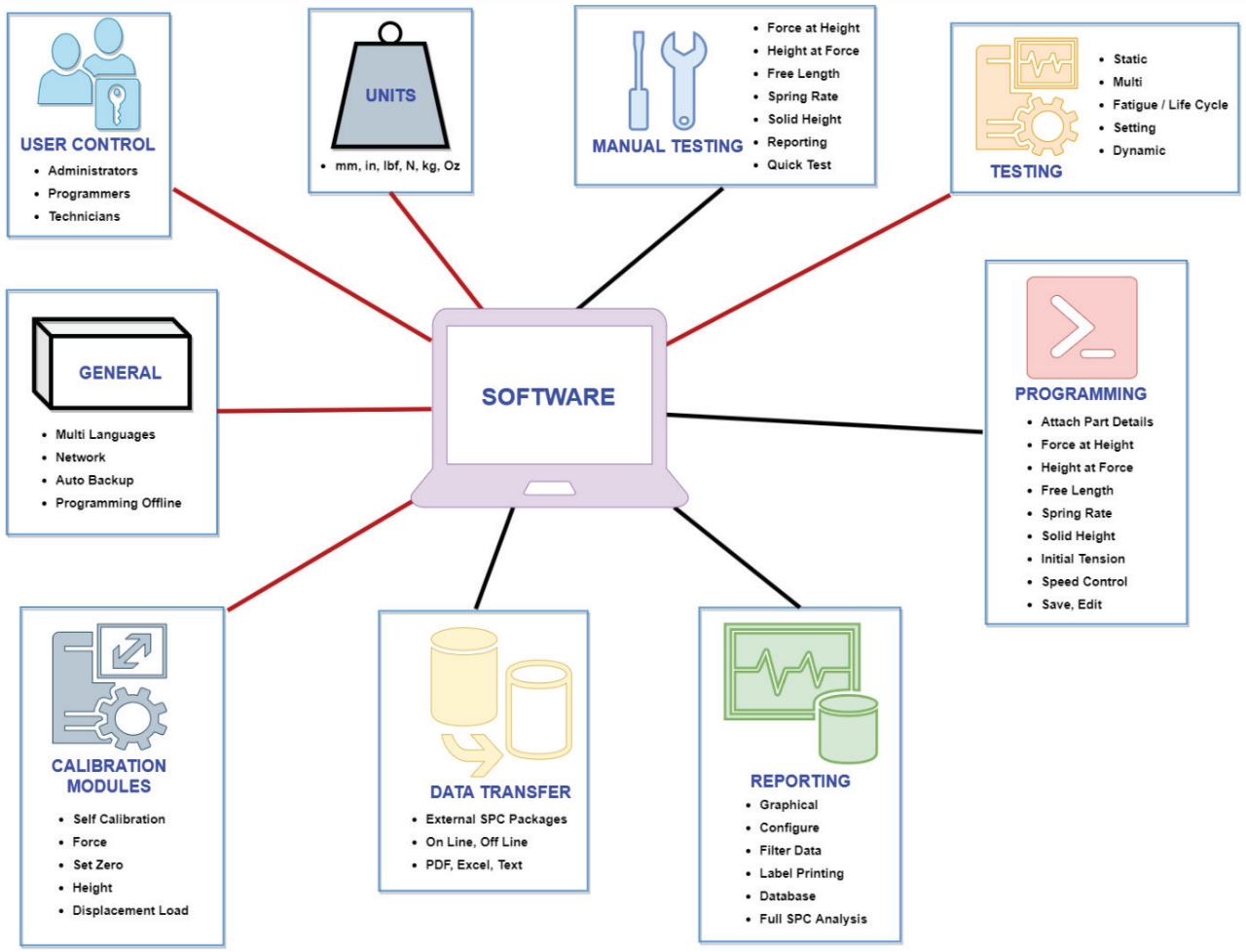
SAS CT-20000HS

20000N / 4500.0LBF CAPACITY
C-FRAME COMPRESSION / EXTENSION SPRING TESTER
SERVO DRIVEN WITH PC AND MONITOR
FLOOR STANDING



CT-20000HS

SPECIFICATIONS	
Load	Recommended Load Capacity 20000N (4500.0lbf)
	Recommended Minimum test load 100N (22.5lbf)
	Load Resolution 0.40N (0.08lbf)
	Load Accuracy per ISO 7500 /1 Class 0.5 (0.5% of load, between 0.5% capacity up to full capacity)
	Continuous digital display or Force/Load height graphical analysis tools and display
	Safe overload to 150% of FS (compression and tension overload protection at 100% of FS load)
Stroke	Stroke 500mm (20”) for both Standard and HS Models
	Resolution: 0.0001mm (0.0000039”) for 500mm stroke
	Accuracy: ±0.01mm (±0.00039”) for 500 stroke: better than 0.005mm Available with independent Calibration for HR Model
Test Speeds	0.1mm/s – 30mm/s (0.236”/min-71”/min)
	12 distinct speed settings available
Software Features	

SPECIFICATIONS

Platten Diameter	200mm (8”)
User Interface	SAS software is included with the purchase of the tester. The buyer can purchase the computer from SAS or supply their own. If the buyer supplies their own User Interface SAS will remote into the computer and install the SAS software
Computer	Intel Dual Core (minimum) processor Serial or USB connection to PC for control and data transfer Fully Microsoft Windows 11 compatible Display 17” Monitor

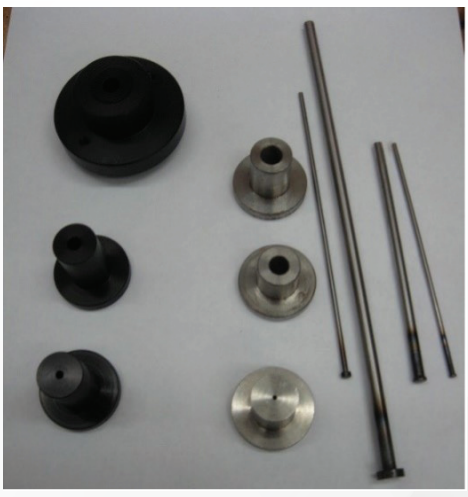
OPTIONS

Dimensional Measurement Software with 150mm Mitutoyo Caliper *(Optional)*

Add dimensional measurement to Spring Force Data on a single combined report.

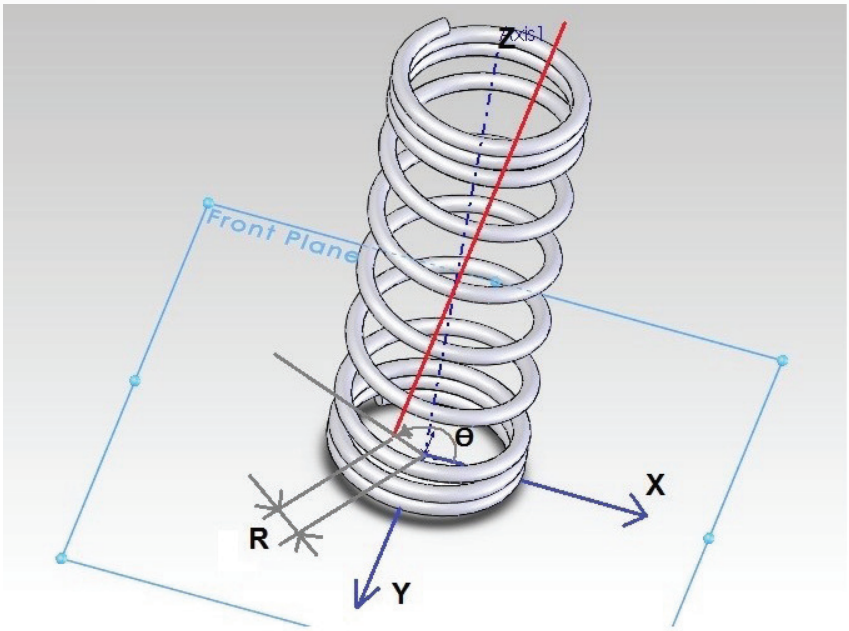
Buckling Prevention Pins and Fixtures *(Optional)*

Allows the safe testing of springs that are flimsy or tend to buckle.



OPTIONS

Conductive Free Length *(Optional)*	Conductive Free Length (CFL) sensing utilizes a digital input connected directly to the servo controller to determine the spring free length by electrical conduction using a 3.5kHz sampling rate. When measured by CFL the results are independent of the spring rate which provides a highly accurate measurement at a 10X speed versus the standard force sensing method. The tested spring must be both electrically conductive and free of scale, oil, or dirt.
Load Vector Module *(Optional)*	A module designed to measure side loads, in plane, and out of plane forces acting on a spring. Vector analysis of the Spring Forces. Available for 500N models and larger.



FORCES MEASURED BY LVA UNIT

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SULΘp	XY plane angle to pierce point (polar coordinate – refer to SULrp).
SULxz	Angle of the force vector projected onto the XZ plane
SULyz	Angle of the force vector projected onto the YZ plane.

SPECIFICATIONS

Dimensions	40 x 85 x 120 cm (15.7” x 22.83” x 47.25”) Weight 240 kg (528lbf)
Power	110V~220V AC 9A (Maximum)

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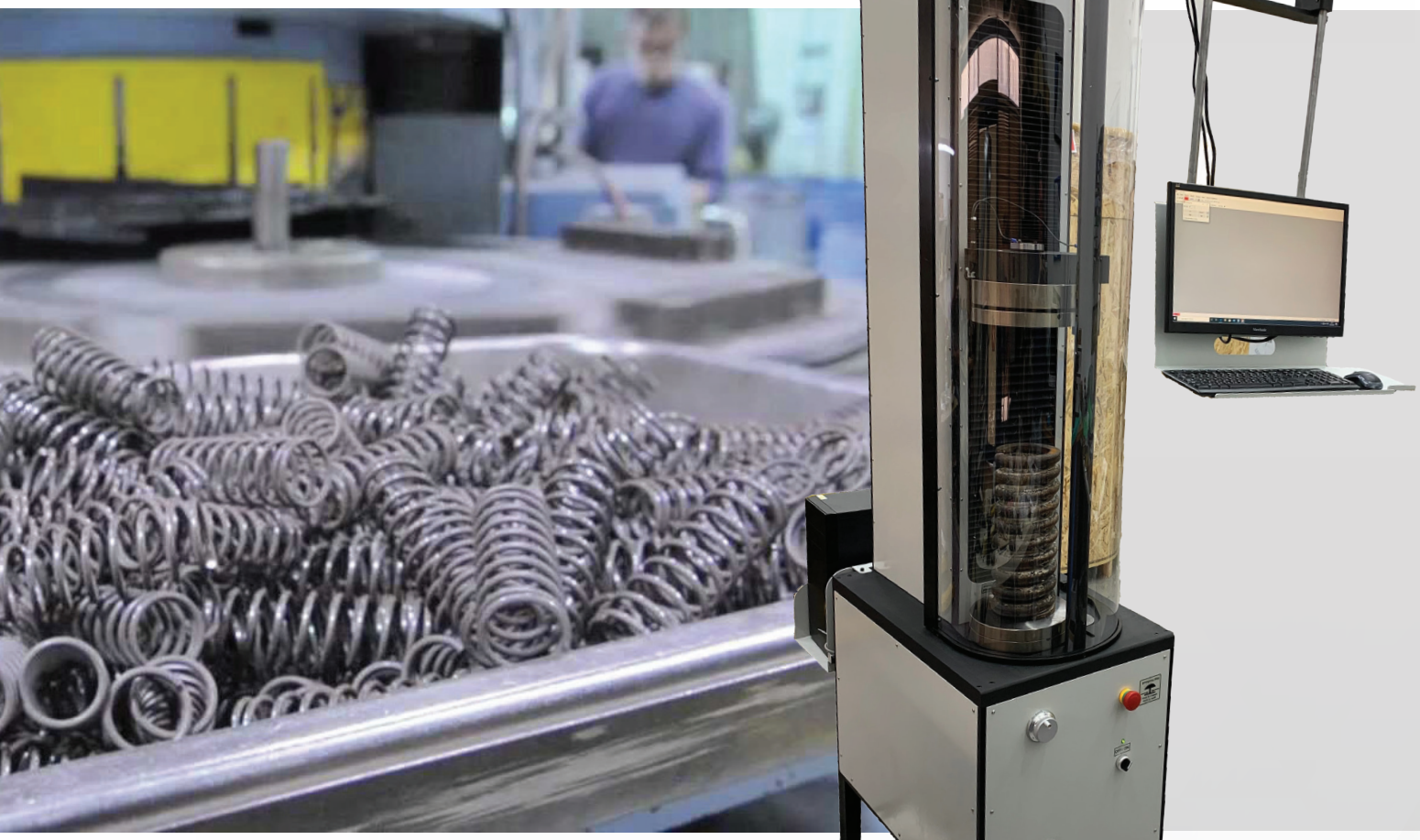
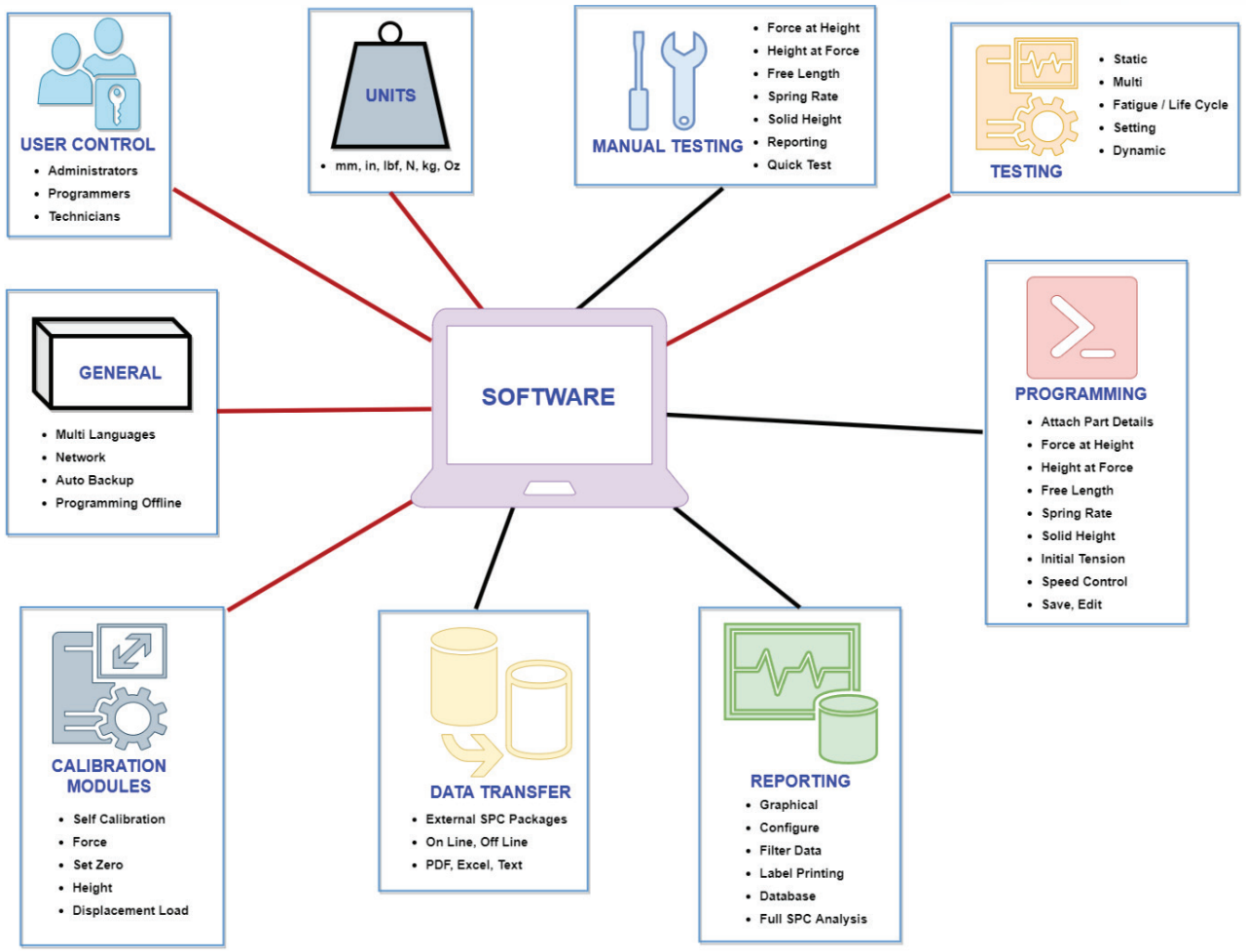
Gibraltar Corporation

SAS CT-10000HS

10000N / 2243.0LBF CAPACITY
C-FRAME COMPRESSION / EXTENSION SPRING TESTER
SERVO DRIVEN WITH PC AND MONITOR
FLOOR STANDING



CT-10000HS

SPECIFICATIONS	
Load	Recommended Load Capacity 10000N (2243.0lbf)
	Recommended Minimum test load 50N (11.2lbf)
	Load Resolution 0.20N (0.04lbf)
	Load Accuracy per ISO 7500 /1 Class 0.5 (0.5% of load, between 0.5% capacity up to full capacity)
	Continuous digital display or Force/Load height graphical analysis tools and display
	Safe overload to 150% of FS (compression and tension overload protection at 100% of FS load)
Stroke	Stroke 10000mm (20”) for both Standard and HS Models
	Resolution: 0.0001mm (0.0000039”) for 500mm stroke
	Accuracy: ±0.01mm (±0.00039”) for 500 stroke: better than 0.005mm Available with independent Calibration for HR Model
Test Speeds	0.1mm/s – 50mm/s (0.236”/min-120”/min)
	12 distinct speed settings available
Software Features	

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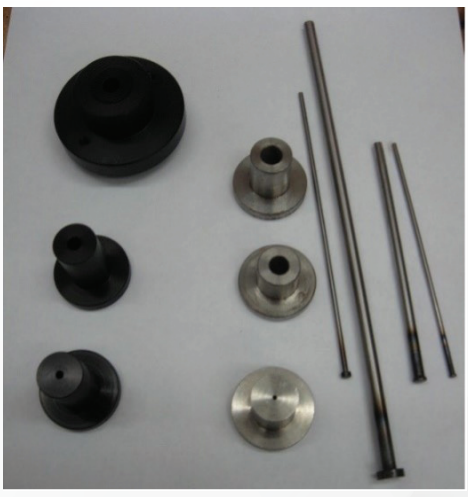

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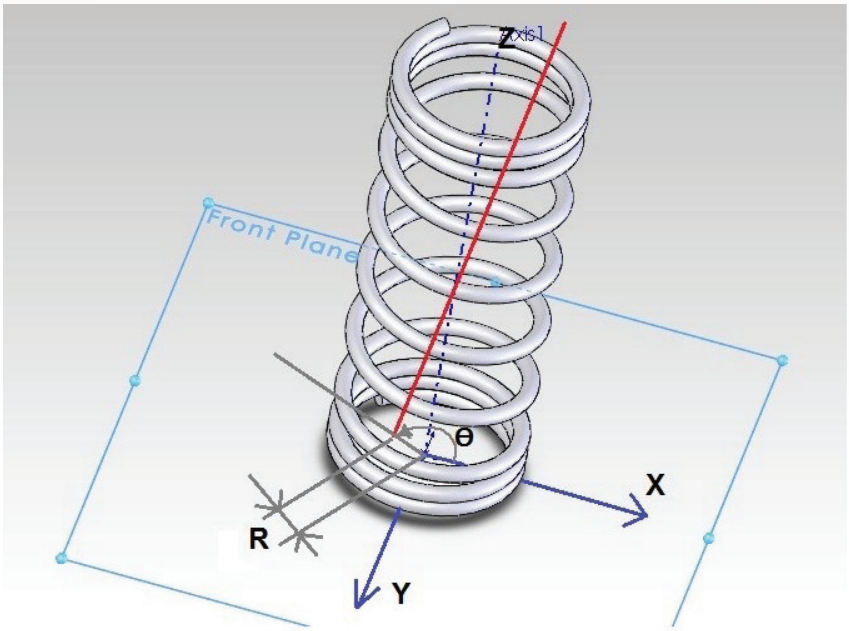

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