

Sentinel™ Family of Test Instruments -- Cincinnati Test Systems

	Sentinel C20-WE	Sentinel C28-WE	Sentinel C28-DP	Sentinel Blackbelt	Sentinel I28	Sentinel M24
Hardware Information						
<i>Enclosure Options</i>	Wall mount only	Wall mount only	Wall mount only	Benchtop only	Wall mount only	Wall mount only
<i>Size (inches)</i>	9 W x 6.5 H x 7.25 D	9 W x 6.5 H x 7.25 D	9 W x 6.5 H x 7.25 D	9 W x 11.5 H x 13 D	12 W x 9.25 H x 8.75 D	15.5 W x 12 H x 8 D
<i>Display</i>	Color LCD 6 line 480x136	Color LCD 12 line 480 x 272	Color LCD 12 line 480 x 272	Color LCD 12 line 480 x 272	Color LCD 12 line 480 x 272	256 x 125 VFD, graphic display
<i>Pass/Fail/In-Test Indicators</i>	Individual LED's	Individual LED's	Individual LED's	Lightring per test port	Light bar indicators	Multi-Color LED's
<i>Keypad Interface</i>	Language Neutral	Language Neutral	Language Neutral	Language Neutral	Language Neutral	Defined Shortcut Keys
<i>Processor</i>	34 Bit/24 Bit A-D	34 Bit/24 Bit A-D	34 Bit/24 Bit A-D	34 Bit/24 Bit A-D	34 Bit/24 Bit A-D	24 Bit/24 Bit A-D
<i>Test Port</i>	1/4" Colder fitting	1/4" Colder fitting	1/4" Colder fitting	1/8" NPT , Male Luer, Female Luer	1/4" Colder fitting	1/4" Colder fitting
<i>Concurrent Channels</i>	1	1	1	1	1	1, 2, 3, 4
<i>Sequential Ports</i>	None	None	None	1, 2, 3, 4	None	None
<i>Internal Vacuum Generator Option</i>	No	No	No	Yes	No	No
<i>External Leak Standard Port Option</i>	No	No	No	Yes	No	No
<i>Restricted Fill (Ramping) Option</i>	No	No	No	Yes	No	No
<i>Auto Supply Shutoff Option</i>	No	No	No	Yes	No	No
<i>CTS Connect Actuator Option</i>	NA	NA	NA	up to 5 pneumatic outputs	NA	NA
Software Capability						
<i>Graphing Capability</i>	Bar graph	Bar graph	Bar graph	Bar graph, Customizable XY graph	Bar graph, Customizable XY graph	Bar graph, Fixed XY graph
<i>Languages</i>	English, Chinese, Korean, Spanish	English, Chinese, Korean, Spanish, Portuguese	English, Chinese, Korean, Spanish, Portuguese	English, Chinese, Korean, Spanish, Portuguese	English, Chinese, Korean, Spanish, Portuguese	English
<i>Security</i>	Password	Password	Password	Key or Password	Password	Password
<i>Program Auto Setup</i>	No	Yes	Yes	Yes	Yes	No
<i>Program Storage</i>	4	32	32	99	99	16 per channel
<i>Program Selection Methods</i>	Keypad, Binary	Keypad, RS232, Binary, Ethernet	Keypad, RS232, Binary, Ethernet	Keypad, RS232, Binary, Ethernet	Keypad, RS232, Binary, Ethernet	Keypad, Pulse, RS232, Ethernet
<i>Program Calibration</i>	Cal Ratio Feedback	Performance Factor Feedback	Performance Factor Feedback	Performance Factor Feedback	Performance Factor Feedback	Cal Ratio Feedback
<i>Manual Edit of Program Calibration</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Test Types</i>						
<i>Pressure Decay - ΔP (vac or press)</i>	Yes	Yes	Pressure Only	Yes	Yes	Yes
<i>Pressure Decay - Leak Std (vac or press)</i>	Yes	Yes	Pressure Only	Yes	Yes	Yes
<i>Pressure Decay - ΔP/ΔT (vac or press)</i>	Yes	Yes	Pressure Only	Yes	Yes	
<i>Pressure Decay - DP (press only)</i>			Yes	Yes	Yes	
<i>Occlusion (vac or press)</i>		Yes	Pressure Only	Yes	Yes	
<i>Mass Flow (press only)</i>				Yes	Yes	
<i>Mass Flow - Continuous (press only)</i>				Yes	Yes	
<i>Mass Flow - Leak Std (press only)</i>				Yes	Yes	
<i>Mass Flow - Differential (press only)</i>					(custom)	
<i>Ramp to ΔP Event (vac or press)</i>				Yes	(custom)	
<i>Ramp to Flow Event (press only)</i>				Yes	(custom)	
<i>Ramp to Proof (press only)</i>				Yes	Yes	
<i>Volumetric Fill (vac or press)</i>					Yes	
<i>Sequential Linking</i>				Yes		
<i>Parent Program</i>				Yes	Yes	
<i>Quik Test</i>	Selectable within Test Program	Selectable within Test Program	Selectable within Test Program	Selectable within Test Program	Selectable within Test Program	Selectable within Test Program
<i>Test Evaluation</i>	Fixed F/P/F - All Programs	Fixed F/P/F - All Programs	Fixed F/P/F - All Programs	Selectable	Selectable	Selectable
<i>Test Pressure Compensation</i>	Yes	Yes	Yes	Yes (selectable on/off)	Yes (selectable on/off)	No

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Environmental Drift Correction	Adjustable per Program	Adjustable per Program	Adjustable per Program	Adjustable per Program	Adjustable per Program	Enable/Disable, fixed window
Units of Measure	Global or per Test Program	Global or per Test Program	Global or per Test Program	Global or per Test Program	Global or per Test Program	per Channel
Pressure Units	psig, psiv, inH2O, cmH2O, mmH2O, kg/cm2, ATM, inHg, cmHg, mmHg, kPa, Pa, MPa, Bar, mBar, Torr	psig, psiv, inH2O, cmH2O, mmH2O, kg/cm2, ATM, inHg, cmHg, mmHg, kPa, Pa, MPa, Bar, mBar, Torr	inH2O, cmH2O, mmH2O, kg/cm2, ATM, inHg, cmHg, mmHg, kPa, Pa, MPa, Bar, mBar, Torr	psig, psiv, inH2O, cmH2O, mmH2O, kg/cm2, ATM, inHg, cmHg, mmHg, kPa, Pa, MPa, Bar, mBar, Torr	psig, psiv, inH2O, cmH2O, mmH2O, kg/cm2, ATM, inHg, cmHg, mmHg, kPa, Pa, MPa, Bar, mBar, Torr	psig, inH2O, oz/in2, ATM, inHg, mmHg, kPa, MPa, Bar, Vac
Flow Units	sccm, sccs, scch, slpm, slps, slph, scfm, scfs, scfh	sccm, sccs, scch, slpm, slps, slph, scfm, scfs, scfh	sccm, sccs, scch, slpm, slps, slph, scfm, scfs, scfh	sccm, sccs, scch, slpm, slps, slph, scfm, scfs, scfh	sccm, sccs, scch, slpm, slps, slph, scfm, scfs, scfh	sccm, sccs, scch, slpm, slps, slph, scfm, scfs, scfh, scis, scim, scih
Time Units	sec, msec, min	sec, msec, min	sec, msec, min	sec, msec, min	sec, msec, min	sec
Tooling Control	Fixed (seal only)	up to 1 motion	up to 1 motion	up to 5 motions	up to 5 motions	Fixed (seal only)
Anti-Tie-Down Start Option	No	No	No	No	No	No
Tooling Feedback	No	No	No	Yes	Yes	No
Internal Result Storage	Up to 5,000 parts	Up to 5,000 parts	Up to 5,000 parts	Up to 8,000 parts expandable with USB Flash	Up to 5,000 parts expandable with USB Flash	Up to 1,000 parts/channel
Result Information	Date, Time, Result	Date, Time, Result	Date, Time, Result	Date, Time, Barcode, Result	Date, Time, Barcode, Result	Date, Time, Result
Pneumatic Capability						
Pressure Ranges (PSIG)	-14.5, 15, 100	-14.5, 2.0, 30, 100, 200	2.0, 30, 100, 200	-14.5, -2, 0.5, 2, 30, 100, 200, 400, 500	-14.5, -2, 0.5, 2, 30, 100, 200, 400, 500	-14.5, 2.0, 30, 100, 200, 500
High Cv Option	up to 100 psig	up to 200 psig	(custom)	(custom)	up to 200 psig	up to 100 psig
Super High Cv Option	No	No	No	2.0, 30, 100 psig (custom)	2.0, 30, 100 psig (custom)	No
Low Cv Option	No	-14.5, 2.0, 30 psig	2.0, 30, 100, 200 psig	-14.5, 2.0, 30 psig	-14.5, 2.0, 30 psig	No
Pressure Transducer	Absolute transducer	Absolute transducer	Absolute transducer	Absolute transducer	Absolute transducer	Absolute transducer
Pressure Calibration	2-point	2-point	1-point & 2-point	6-point	6-point	2-point
Electronic Regulator	No	Optional (1)	No	Optional (2)	Optional (1)	No
Flow Meter Range	No	No	No	0.5-50, 2.0-250, 30-3000 scc/m	0.5-50, 2.0-250, 30-3000 scc/m	No
Flow Calibration	No	No	No	6-point	6-point	No
Differential Pressure Transducer	No	No	Yes, Protected Pneumatic Circuit for 5 psi Differential	No	No	No
Electrical and Connectivity						
Power Supply	88-264 VAC, 47-63 Hz, Auto-switching	88-264 VAC, 47-63 Hz, Auto-switching	88-264 VAC, 47-63 Hz, Auto-switching	88-264 VAC, 47-63 Hz, Auto-switching	88-264 VAC, 47-63 Hz, Auto-switching	88-264 VAC, 47-63 Hz, Auto-switching
I/O Options	6 inputs/3 outputs	6 inputs/3 outputs	6 inputs/3 outputs	6 inputs/6 outputs	12 inputs/12 outputs	4 inputs/4 outputs (per channel)
I/O Programmability	1 in / 1 out programmable	6 in / 3 out programmable	6 in / 3 out programmable	6 in / 6 out programmable	12 in / 12 out programmable	programmable per channel
I/O Cable option	Cable,CTS,P56-540	Cable,CTS,P56-540	Cable,CTS,P56-540	Cable,CTS,P56-540		None
I/O Power	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC or 115VAC
Communication	RS232 (1)	RS232 (1), Telnet (1)	RS232 (1), Telnet (1)	RS232 (1), Telnet (1)	RS232 (2), Telnet (1)	RS232 (2), Telnet (1), RS485 (1)
Test Result Output	Fixed format	Configurable Format	Configurable Format	Configurable Format	Configurable Format	Configurable Format
Email Alerts	No	No	No	Yes	Yes	No
Bar Code Ready (RS232)	No	No	No	Yes	Yes	No
USB Backup/Restore	Backup only	Backup only	Backup only	Yes	Yes	No
USB Reports	No	No	No	Yes	Yes	No
USB Compatibility	FAT32, USB 1.0, 1.1, 2.0	FAT32, USB 1.0, 1.1, 2.0	FAT32, USB 1.0, 1.1, 2.0	FAT32, USB 1.0, 1.1, 2.0	FAT32, USB 1.0, 1.1, 2.0	No
Other Information						
Calibration Cert. for Leak Standard	Yes	Yes	Yes	Yes	Yes	Yes
Calibration Cert. for Pressure	No	Yes	Yes	Yes	Yes	On request

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<i>Calibration Cert. for Flow</i>	No	No	No	Yes	Yes	No
<i>Firmware Validation Document</i>	Yes	Yes	Yes	Yes	Yes	No
<i>CE Certified</i>	Yes	Yes	Yes	Yes	Yes	Yes