

Data Sheet

Momentum® 5400.6

Durable mobility anywhere, any time

**500, 250 and 120 GB • 5,400 RPM •
SATA 3-Gb/s with NCQ • G-Force Protection™**

Key Advantages

- 8-MB cache delivers fast performance
- Robust design and high shock tolerance enable mobility in rugged operating environments
- 1,000 Gs of non-operating shock make the drive ideal for notebook PCs and industrial applications
- G-Force Protection feature available for added robustness in mobile environments
- Green features:
 - Leverages Seagate laptop power management technology
 - Uses ramp load features that remove the head from the disc during idle periods, improving idle power consumption and adding to the durability of the drive
- QuietStep™ technology enables ultra-quiet load/unload acoustics
- SATA 3-Gb/s interface with Native Command Queuing
- Perpendicular recording technology
- High instantaneous (burst) data transfer rates up to 3 Gb/s

Best-fit Applications

- Mainstream laptops
- External storage solutions/boxes
- Whitebooks
- Industrial applications requiring a small form factor



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With fourth-generation perpendicular magnetic recording technology and capacities up to 500 GB, the Seagate® Momentum 5400.6 drive offers the best combination of performance, capacity, mobility and durability in a laptop hard drive. The Momentum 5400.6 drive offers a fast SATA 3-Gb/s interface plus an 8-MB cache, making the drive ideal for mainstream laptops, workstations, gaming laptops and personal external storage.

G-Force Protection

When a laptop is dropped, the most catastrophic damage to the hard drive occurs when the head scrapes across the surface of the disc, causing potential data loss. The G-Force Protection feature, an optional drop sensor, protects the Momentum 5400.6 drive against shock by sensing when the system is in a free-fall state, moving the heads off the platter and locking them in place — all within three-tenths of a second.

Seagate Global Customer Support

- Get pre-sales and technical support at support.seagate.com
- Visit our knowledge base for answers to common support questions
- Find documentation for current and legacy drives
- Use our online troubleshooting and diagnostic tools
- Download DiscWizard™ to help transfer data from an older drive
- Seagate also offers multilingual phone, e-mail and chat support
- Seagate Design Service Centres help companies transform innovative ideas into viable products

| Specifications | 500 GB ¹ | 250 GB ¹ | 120 GB ¹ |
|---|--|--|------------------------|
| Model Number | ST9500325AS ST9500325ASG ² | ST9250315AS ST9250315ASG ² | ST9120315AS |
| Interface Options | SATA 3-Gb/s NCQ | SATA 3-Gb/s NCQ | SATA 3-Gb/s NCQ |
| Performance | | | |
| Transfer Rate | | | |
| Maximum Internal (Mb/s) | 1,175 | 1,175 | 1,175 |
| Maximum External (MB/s) | 300 | 300 | 300 |
| Cache (MB) | 8 | 8 | 8 |
| Average Latency (ms) | 5.6 | 5.6 | 5.6 |
| Spindle Speed (RPM) | 5,400 | 5,400 | 5,400 |
| Areal Density (Gb/in ²) | 394 | 394 | 394 |
| Configuration/Organisation | | | |
| Discs/Heads | 2/4 | 1/2 | 1/1 |
| Bytes per Sector | 512 | 512 | 512 |
| Reliability/Data Integrity | | | |
| G-Force Protection™ | Available | Available | — |
| Head-Rest Method | QuietStep™ Ramp Load | QuietStep Ramp Load | QuietStep Ramp Load |
| Load/Unload Cycles | >600,000 | >600,000 | >600,000 |
| Non-recoverable Read Errors per Bits Read | 1 per 10 ¹⁴ | 1 per 10 ¹⁴ | 1 per 10 ¹⁴ |
| Annualised Failure Rate (AFR): | 0.48% | 0.48% | 0.48% |
| Power Management | | | |
| Startup Current 5V (amps max) | 1.0 | 1.0 | 1.0 |
| Power Management (W) | | | |
| Seek | 1.54 | 1.54 | 1.54 |
| Read/Write Avg | 2.6/2.85 | 2.6/2.85 | 2.6/2.85 |
| Idle/Standby Avg | 0.81/0.22 | 0.81/0.22 | 0.81/0.22 |
| Environmental | | | |
| Temperature (°C) | | | |
| Operating | 0 to 60 | 0 to 60 | 0 to 60 |
| Non-operating | -40 to 70 | -40 to 70 | -40 to 70 |
| Shock (Gs) | | | |
| Operating: 2 ms | 350 | 350 | 350 |
| Non-operating: 1 ms | 1,000 | 1,000 | 1,000 |
| Acoustics (bels — sound power) | | | |
| Idle | 2.4 | 2.4 | 2.4 |
| Seek | 2.6 | 2.6 | 2.6 |
| Physical | | | |
| Height (in/mm) | 0.374/9.5 | 0.374/9.5 | 0.374/9.5 |
| Width (in/mm) | 2.75/69.85 | 2.75/69.85 | 2.75/69.85 |
| Depth (in/mm) | 3.957/100.5 | 3.957/100.5 | 3.957/100.5 |
| Weight (lb/g) | 0.218/98.8 | 0.206/93.5 | 0.206/93.5 |

¹ One gigabyte, or GB, equals one billion bytes when referring to hard drive capacity.

² Drive with G-Force Protection feature

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