



# WD Re+™

## Datacenter Capacity HDD

**Power-optimized, high-capacity storage for high-availability deployments.**

The WD Re+ hard drive offers the industry an unprecedented combination of power optimization, capacity and durability. This drive is the key building block for storage systems which need power efficiency and maximum application intensity in the same solution. The WD Re+ drive optimizes Performance-per-Watt, GB-per-Watt and Workload-per-Watt, providing an entirely new option for modern storage infrastructures. Built on WD's high-volume, multi-generation, 5-platter platform, the WD Re+ drive delivers the industry's lowest power high capacity drive.



**INTERFACE**  
SATA 6 Gb/s

**WIDTH/HEIGHT**  
3.5-inch/1-inch

**ROTATIONAL SPEED**  
5760 RPM

**CAPACITIES**  
5 TB to 6 TB

**MODEL NUMBERS**  
WD6005FRPZ  
WD5005FRPZ

## Product Benefits

### Capacity storage for the modern datacenter

These high capacity drives are built to succeed in today's modern datacenters, where the insatiable demand for dense storage must fit into a datacenter facility with fixed power capability, increasing the desire for drives with improved power efficiency metrics of GB/W and Performance/W.

### Designed for high-intensity applications

The WD Re+ drive is designed to handle heavy workloads of up to 550 TB per year in high-intensity, always-on datacenter applications. These drives deliver power efficiencies and reliability to any datacenter environment.

### Designed for quality and reliability

With up to 1.2 million hour MTBF, this power optimized drive delivers durability and reliability for 24x7x365 operation in the most demanding storage environments.

### Vibration Protection

Enhanced RAFF™ technology includes sophisticated electronics to monitor the drive and correct both linear and rotational vibration in real time. The result is a significant performance improvement in high vibration environments.

### StableTrac™

The motor shaft is secured at both ends to reduce system-induced vibration and stabilize platters for accurate tracking during read and write operations.

### Dual actuator technology

A head positioning system with two actuators that improves positional accuracy over the data track(s). The primary actuator provides coarse displacement using conventional electromagnetic actuator principles. The secondary actuator uses piezoelectric motion to fine tune the head positioning to a higher degree of accuracy.

### Multi-axis shock sensor

Automatically detects the subtlest shock events and compensates to protect the data.

### RAID-specific, time-limited error recovery (TLER)

Reduces drive fallout caused by the extended hard drive error-recovery processes common to desktop drives.

### NoTouch™ ramp load technology

The recording head never touches the disk media ensuring significantly less wear to the recording head and media as well as better drive protection in transit.

### Thermal extended burn-in test

Each drive is put through extended burn-in testing with thermal cycling to ensure reliable operation.

### Dynamic fly height technology

Each read-write head's fly height is adjusted in real time for optimum reliability.

### 3D Active Balance™ Plus

Our enhanced dual-plane balance control technology significantly improves the overall drive performance and reliability. Hard drives that are not properly balanced may cause excessive vibration and noise in a multi-drive system, reduce the hard drive life span, and degrade the performance over time.

## Applications

Power-sensitive datacenters with applications that demand high-intensity workloads.

## The WD Advantage

WD puts our datacenter products through extensive Functional Integrity Testing (F.I.T.) prior to any product launch. This testing ensures our products consistently meet the high quality and reliability standards of the WD brand. Following a FIT test the Enterprise System Group (ESG) testing validates interoperability with HBAs, operating systems and drivers to ensure an even greater level of quality, reliability and peace of mind.

WD also has a detailed Knowledge Base with helpful articles and software utilities. Our customer support lines have long operational hours to ensure you get the help you need when you need it. Our toll-free customer support lines are here to help or you can access our WD Support site for additional details.



Specifications	6 TB	5 TB
Model number <sup>1</sup>	WD6005FRPZ	WD5005FRPZ
Interface	SATA 6 Gb/s	SATA 6 Gb/s
Formatted capacity <sup>2</sup>	6 TB	5 TB
User sectors per drive	11,721,045,168	9,767,541,168
Native command queuing	Yes	Yes
Form factor	3.5-inch	3.5-inch
RoHS compliant <sup>3</sup>	Yes	Yes
<b>Performance</b>		
Data transfer rate (max) <sup>2</sup> Buffer to host Host to/from drive (sustained)	6 Gb/s 175 MB/s	6 Gb/s 175 MB/s
Cache (MB)	128	128
Rotational speed (RPM)	5760	5760
<b>Reliability/Data Integrity</b>		
Load/unload cycles <sup>4</sup>	600,000	600,000
Non-recoverable read errors per bits read	<1 in 10 <sup>15</sup>	<1 in 10 <sup>15</sup>
MTBF (hours) <sup>5</sup>	1,200,000	1,200,000
AFR (%) <sup>6</sup>	0.73	0.73
Limited warranty (years) <sup>7</sup>	5	5
<b>Power Management</b>		
Average power requirements (W) Sequential read Sequential write Random read/write Idle	5.8 6.2 5.5 4.6	5.8 6.2 5.5 4.6
<b>Environmental Specifications<sup>7</sup></b>		
Temperature (°C) Operating Non-operating	5 to 55 -40 to 70	5 to 55 -40 to 70
Shock (Gs) Operating (2 ms, read/write) Operating (2 ms, read) Non-operating (2 ms)	30 65 300	30 65 300
Acoustics (dBA) <sup>8</sup> Idle Seek (average)	27 29	27 29
<b>Physical Dimensions</b>		
Height (in./mm, max)	1.028/26.1	1.028/26.1
Length (in./mm, max)	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6
Weight (lb./kg, ± 3%)	1.58/0.72	1.58/0.72

<sup>1</sup> Not all products may be available in all regions of the world.

<sup>2</sup> As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 6 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit [www.sata-io.org](http://www.sata-io.org) for details.

<sup>3</sup> WD hard drive products manufactured and sold worldwide after June 8, 2011, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the RoHS Directive 2011/65/EU.

<sup>4</sup> Controlled unload at ambient condition.

<sup>5</sup> Product MTBF and AFR specifications are based upon a 40°C base casing and system workloads of up to 550 TB/year (workload is defined as the amount of user data transferred to or from the hard drive).

<sup>6</sup> See <http://support.wd.com/warranty> for regional specific warranty details.

<sup>7</sup> No non-recoverable errors during operating tests or after non-operating tests.

<sup>8</sup> Sound power level.

Western Digital Technologies, Inc.  
3355 Michelson Drive, Suite 100  
Irvine, California 92612  
U.S.A.

**For service and literature:**

<http://support.wd.com>  
[www.wd.com](http://www.wd.com)

800.ASK.4WDC North America  
(800.275.4932)  
800.832.4778 Spanish  
+86.21.2603.7560 Asia Pacific  
00800.27549338 Europe  
(toll free where available)  
+31.880062100 Europe/Middle East/Africa



CAN ICES-3 (B) / NMB-3 (B)

Western Digital, WD, and the WD logo are registered trademarks in the U.S. and other countries; and WD Re+, RAFF, NoTouch, StableTrac, 3D Active Balance, and FIT Lab are trademarks of Western Digital Technologies, Inc. Other marks may be mentioned herein that belong to other companies. Product specifications subject to change without notice.