Seagate

ST1.3 Series Installation Guide
ST612712DEG, ST612712DE, ST610712DEG, ST610712DE, ST680712DEG, ST680712DE, ST660712DEG and ST660712DE

Zero Insertion Force (ZIF) Disc Drives

The easiest way to install your ST1.3 Series drive

Many of today's consumer products, like cameras, notebook computers, MP3 players, printers and more have been designed to make it possible for the end user to use hard disc drives. Your Seagate® ST1.3 Series drive is designed for such use. Refer to your product's user manual for the location of the media compartment and the specific instructions regarding insertion and removal of removable media devices like the ST1.3 Series disc drive. Your product manufacturer's support Web site will have the most up-to-date information. Read and follow all instructions regarding the proper steps to be taken when using your Seagate ST1.3 Series disc drive.

The Seagate ST1.3 Series ZIF interface disc drives, ST612712DEG, ST612712DE, ST610712DEG, ST610712DE, ST680712DEG, ST680712DE, ST660712DEG and ST660712DE are designed for embedded installation or as a fixed storage solution. Follow the installation instructions provided on this instruction sheet. Your product manufacturer's support Web site will have the most up-to-date information on installing and removing storage devices. Read and follow all instructions regarding the proper steps to be taken when using your Seagate ST1.3 Series disc drive. It is important to follow the handling precautions and electrostatic discharge protection information below when handling any electronic device. It is always a good idea to back up all your data before installing any new hardware in your computer.

Handling precautions/electrostatic discharge protection

- ST1.3 Series disc drives are fragile. Do not drop or jar the drive. Handle the drive only by the edges or by the finger grip area shown in Figure 1. Keep the device in the packaging until you are ready to install it and between uses to minimize handling damage.
- It may be necessary to turn off the power to the host product during installation. Refer to your product's user manual for details regarding installation and removal of media devices.
- Do not disassemble the drive. Doing so voids the warranty.
  See the warranty information on page 2.
- Do not expose the drive to extreme temperatures or humidity conditions.
- Do not apply pressure, write on, or attach labels to the top or bottom of the drive.
- Do not cover or otherwise obstruct the breather hole on the top of the drive. (See Figure 3)
- Keep the drive away from strong magnetic fields to avoid data loss.
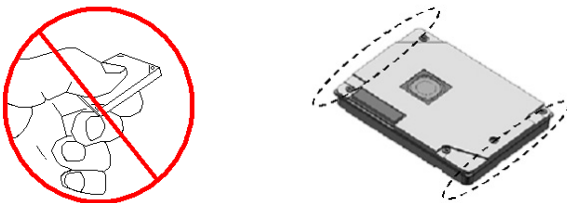

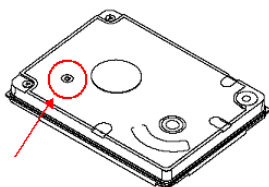**Figure 1   ST1.3 Series—Improper handling and Finger grip areas**

Figure 2   ST1.3 Series—Breather hole location

Drive characteristics

	ST612712DEG ST612712DE	ST610712DEG ST610712DE
Formatted capacity	12.0 Gbytes	10.0 Gbytes
Total number of sectors*	23,438,016	19,533,024
Cache size	2 Mbytes	2 Mbytes

	ST680712DEG ST680712DE	ST660712DEG ST660712DE
Formatted capacity	8.0 Gbytes	6.0 Gbytes
Total number of sectors*	15,625,008	11,719,008
Cache size	2 Mbytes	2 Mbytes

*One sector equals 512 bytes.

Note. The Seagate ST1.3 Series ZIF interface disc drive is compatible with the ATA version 7.

Note. This drive is designed for a product that supplies interface signals and +3.3V power through the ZIF connector. See Figure 3 for drive dimensions.
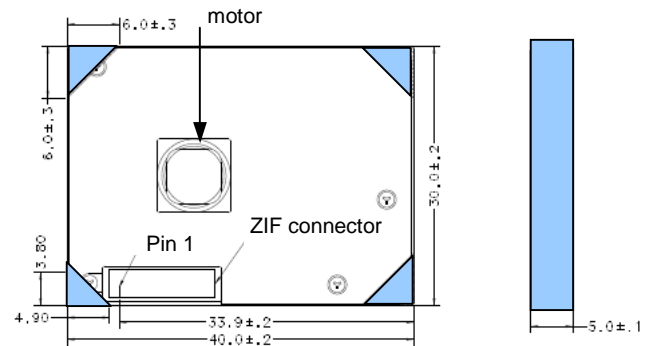

Figure 3   ST1.3 Series, DE/DEG dimensions—end and bottom views

Installing your ST1.3 Series ZIF interface model disc drive

Follow installation instructions for media devices provided in your product's user manual to determine if your Seagate ST1.3 Series disc drive is compatible. See Figure 3 for drive dimensions. Follow all handling precautions/electrostatic discharge protection suggestions when installing any drive.

Follow the precaution when installing and removing your ST1.3 Series Flex interface disc drive:

- Drive electronics are extremely sensitive to static electricity. Caution should be exercised when handling any electronic device. Wear an Electrostatic Discharge (ESD) ground strap when integrating the flex cable into host systems. Improper handling may cause ESD damage to the ST1.3 Series disc drive's electronics.
- Do not bend the cable sharply as this may cause the electrical traces to be broken. See Figure 4.
- When the drive is powered on, do not physically remove the flex cable from the host connector. Power down the system first before removing the drive.
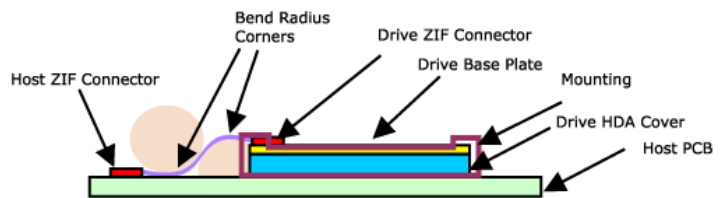

Figure 4   Examples of mounting ZIF interface

Troubleshooting

If your drive is not working properly, these troubleshooting tips may help solve the problem.

1. **Does the drive spin up?** A spinning drive produces a faint whine and clicking noise. If your drive does not spin, check that the drive is securely inserted.

2. **Does the computer recognize the drive?** Verify that the drive is enabled in the system CMOS or setup program. If not, select the auto detect option and enable it. If your drive has a problem, it may not be recognized by the system. If the operating system does not recognize the drive, you need to load your host adapter drivers.

3. **Does ScanDisk find the drive defect-free?** ScanDisk is a utility located on your Windows startup diskette that scans the drive for defects. If defects are detected, this may be an indication of a problem.

4. **Why does my computer hang on startup?** Verify that your system is ATA compatible. You need either an ATA-compatible motherboard connector or ATA host adapter to use this drive.

Note. If these tips do not answer your question or solve the problem, contact your dealer or visit http://seatools.seagate.com to download SeaTools™ disc diagnostics software and more troubleshooting advice.

Seagate support services

For online information about Seagate products, visit www.seagate.com or e-mail your disc questions to DiscSupport@Seagate.com.

If you need help installing your drive, consult your dealer first. If you need additional help, call a Seagate technical support specialist. Before calling, note your system configuration and drive model number.

Africa	+1-405-324-4714	Netherlands	00 800-47324283
Australia	1800-14-7201	New Zealand	0800-443988
Belgium	00 800-47324283	Norway	00 800-47324283
China*	800-810-9668	Poland	00 800-311 12 38
Denmark	00 800-47324283	Spain	00 800-47324283
France	00 800-47324283	Sweden	00 800-47324283
Germany	00 800-47324283	Switzerland	00 800-47324283
Hong Kong	800-90-0474	Singapore	800-1101-150
Hong Kong†	001-800-0830-1730	Taiwan*	00-800-0830-1730
India	1-800-180-1104	Thailand	001-800-11-0032165
Indonesia	001-803-1-003-2165	Turkey	00 800-31 92 91 40
Ireland	00 800-47324283	United Kingdom	00 800-47324283
Italy	00 800-47324283	USA/Canada/	1-800 SEAGATE or
Japan	0034 800 400 554	Latin America	+1-405-324-4700
Korea	007 98 8521 7635	Other European	
Malaysia	1-800-80-2335	countries	+1-405-324-4714
Middle East	+1-405-324-4714		

*Mandarin
†Cantonese

Warranty. To determine the warranty status of your Seagate disc drive, contact your place of purchase or visit our web site at www.seagate.com for more information.

Return Merchandise Authorization (RMA). Run SeaTools to diagnose your drive before requesting a return authorization. In addition, please verify that your drive is defective by following the troubleshooting checklist in this guide. Seagate offers comprehensive customer support for all Seagate drives worldwide. Seagate customer service centers are the only facilities authorized to service Seagate drives. Drive return procedures vary depending on geographical location and are subject to current international trade regulations.

Shipping the drive

Caution. Back up the data before shipping. Seagate assumes no responsibility for data lost during shipping or service.

Shipping drive in an unapproved container voids the warranty. Pack the drive with original box and packing materials. Use no other materials. This prevents electrical and physical damage in transit.

Electromagnetic compliance for the European Union. This model complies with the European Union requirements of the Electromagnetic Compatibility Directive 89/336/EEC of 03 May 1989 as amended by Directive 92/31/EEC of 28 April 1992 and Directive 93/68/EEC of 22 July 1993. Compliance of this drive, as a system component, was confirmed with a test system. We cannot guarantee that your system will comply. The drive is not meant for external use (without properly designed enclosure, shielded I/O cable, etc.).

Sicherheitsanleitung 1. Das Gerät ist ein Einbaugerät, das für eine maximale Umgebungstempeatur von 70°C vorgesehen ist. **2.** Als Versorgungsspannugen werden benötigt: +5V +/- 10% 0.330mA; +3.3V +/- 5% 0.330mA **3.** Die Versorgungsspannung muss SELV entsprechen. **4.** Alle Arbeiten auf dem Festplattte dürfen nur von Ausgebiletem Serciepersonal durchgeführt werden. Bitte entfernen Sie nicht die Aufschriftenschilder des Laufwerkes. **5.** Der Einbau des Laufwerkes muss den Anforderungen gemäss DIN IEC 950 VDE 0805/05.90 entspreche.