Installation and Setup Guide

Clavister SG10 Series

Clavister AB
Torggatan 10
SE-891 33 Örnsköldsvik
SWEDEN

Phone: +46-660-299200
Fax: +46-660-12250

www.clavister.com

Build: 890
Published 2008-06-19
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Preface

Target Audience

The target audience for this guide is the user who has taken delivery of a packaged Clavister SG10 Series appliance. The guide takes the user from unpacking and installation of the device through to power-up and initial network connection.

Text Structure

The text is divided into chapters and subsections. Numbered subsections are shown in the table of contents at the beginning of the document.

Text links

Where a "See section" link is provided in the main text, this can be clicked on to take the reader directly to that reference eg. see Chapter 6, *Hardware Specifications*.

Web links

Web links included in the document are clickable eg. http://www.clavister.com

Notes to the main text

Special sections of text which the reader should pay special attention to are indicated by icons on the the left hand side of the page followed by a short paragraph in italicized text. There are the following types of such sections:

Note
This indicates some piece of information that is an addition to the preceding text. It may concern something that is being emphasised or something that is not obvious or explicitly stated in the preceding text.

Tip
This indicates a piece of non-critical information that is useful to know in certain situations but is not essential reading.

Caution
This indicates where the reader should be careful with their actions as an undesirable situation may result if care is not exercised.

Important
This is an essential point that the reader should read and understand.

Warning
This is essential reading for the user as they should be aware that a serious situation may result if certain actions are taken or not taken.

Chapter 1. Product Overview

1.1. Unpacking the Product

This section details the unpacking of the SG10 Series appliance. Open the packaging box used for shipping and carefully unpack the contents. The box should contain the following:

1. The Clavister SG10 Series Appliance.
2. 1 x Ethernet cable.
3. CD-ROM containing:
   - Clavister FineTune software.
   - Clavister Logger software.
   - Product documentation in PDF format.
4. Certificate of Authenticity
5. A printed "Quick Start Guide" to help to quickly get the appliance running.

Figure 1.1. An Unpacked Clavister SG10 Series Appliance

Note

If any items are missing from your package, please contact your reseller or distributor. All PDF documentation can be freely downloaded from the Clavister website.

1.2. Ports and Connectors

This section is an overview of the hardware's external design and construction.

Figure 1.2. Rear view of the Clavister SG10 Series.

The SG10 features an RS232 console port on the far left. To the right are 6 Fast Ethernet interface ports which can operate at 10Mb or 100Mb speeds. These ports are referred to by the administrator using logical interface names. The first 4 ports are marked **LAN 1** to **LAN 4**. The two ports at the right are marked as **AUX**, and **WAN**. These ports fullfill the following functions:

WAN This port should be connected to the external wide area network (eg. the internet). It is 100Base-T or 10Base-T capable. The default interface name is **wan**.

AUX This port is also 100Base-T or 10Base-T capable. The default interface name is **aux**.

LAN 1-4 These ports are general purpose interfaces that connect to the main processor via a switch chip which is common to all seven ports. All are designed to be connected to internal networks. All 4 ports share a single default logical interface names which is called **lan**. In other words any rule in the IP rule-set that uses **lan** as the source or destination interface will apply to traffic on any of the physical ports LAN 1-4.

Ethernet Connection Limitations

With the SG10 Series there is a limit to how many devices can be connected via the ethernet ports. This number is determined by the type of SG10 license purchased and the size of CorePlus ARP table that the license allows.

Changing default interface names

The default logical interface names assigned to physical ports can be changed later by the SG10 Series appliance administrator. In the case of **lan**, changing this name will change the shared name for physical ports LAN 1-4.

Important

Traffic that enters a SG10 Series device by one of the 4 general purpose interfaces LAN1 to LAN4 and then leaves by another of those same 4 interfaces destined for the same IP subnet, will not be subject to the CorePlus IP rule-set. This is because that traffic will pass through the device's internal switch logic and it will be sent directly to the destination interface by the switch.

Power and Status LEDs

The front of the SG10 Series device features two LED lights at the left. One is for power, the other indicates CorePlus status. The Power LED should be green when power is applied (see Section 2.2, “Connecting Power”). The Status LED is dark during the CorePlus firmware loading sequence and illuminates green when CorePlus is successfully loaded.

Figure 1.3. SG10 Power and Device Status LEDs

Port Status LEDs

The front of the SG10 has an LED which indicates the status of each port. These lights are either dark or green. Green indicates that the link is established and flashing green indicates traffic on the port.

Figure 1.4. SG10 Port Status LEDs

Chapter 2. Installation

2.1. Installation Guidelines

Follow these guidelines when installing your Clavister SG10 Series appliance:

- Make sure that the power source circuits are properly grounded, then use the power cord supplied with the appliance to connect it to the power source.
- If your installation requires a different power cord than the one supplied with the appliance, be sure to use a power cord displaying the mark of the safety agency that defines the regulations for power cords in your country. The mark is your assurance that the power cord can be used safely with the appliance.
- Ensure that the appliance does not overload the power circuits, wiring and over-current protection. To determine the possibility of overloading the supply circuits, add together the ampere ratings of all devices installed on the same circuit as the appliance and compare the total with the rating limit for the circuit. The maximum ampere ratings are usually printed on the devices near the AC power connectors.
- Do not install the appliance in an environment where the operating ambient temperature might exceed the specified operating range (see Chapter 6, *Hardware Specifications*).
- Make sure that airflow around the sides and back of the appliance is not restricted.

Note

Detailed information concerning power supply range, operating temperature range etc. can be found at the end of this publication in Chapter 6, Hardware Specifications.

Flat Surface Installation

The SG10 Series device can be mounted on any appropriate stable, flat, level surface that can safely support the weight of the appliance and its attached cables.

Caution

Please ensure there is adequate space around the unit for ventilation and access to operating switches and cable connectors. No other objects should be placed on top of the unit.

2.2. Connecting Power

This section describes connecting power. Power should not actually be applied until after the local console has been connected as described in Section 3.1.2, “Connecting the Console Port”. The reason for this is that there is no On/Off switch on the SG10 Series and as soon as power is applied the boot-up dialog sequence appears on the console screen.

Figure 2.1. SG3200 Rear View

Important
Please read the advisory concerning electrical safety in Chapter 5, Safety.

Figure 2.2. SG10 Power Socket and Reset Button

Connecting AC Power

To connect power, follow these steps:

1. Fit the power cord into the power adapter that comes with the SG10 Series.
2. Plug the power adapters power plug into the power receptacle on the back panel of the SG10 Series device.
3. Once a console has been connected to the unit, plus the other end of the cord into a power outlet. There is no On/Off switch so the unit will boot up immediately resulting in startup output to the console.

Protecting Against Power Surges

It is strongly recommended that the purchase and use of a separate surge protection unit from a third party is considered to ensure that the hardware is protected from damage by electrical power surges. Surge protection is particularly important in locations subject to lightning strikes.

A surge protection unit should be installed exactly according to the manufacturer's instructions as correct installation of such units is vital for their effectiveness.

2.3. Resetting to factory defaults

In some unusual cases, it may be necessary to reset the SG10 Series device to the state it was in when it left the factory.

The recessed button to the left of the power inlet on the back of the SG10 Series can be used to reset the device to its factory defaults.

To reset to factory defaults:

1. Open a console display connected to the console port.
2. Power off the device by removing the power cable at the back.
3. Push in the reset button with a suitable pointed tip tool.
4. Hold the button in and at the same time re-apply power to the unit.
5. Continue holding in the button for at least 30 seconds longer after power is applied.
6. The console output will now indicate that the device has been reset to its factory defaults.
7. Release the button and the device can now be configured through the console as though it was brand new.
8. The console password will also be reset to the factory default of no password, so this should be re-entered to protect the console.

Chapter 3. Initial Setup

3.1. Attaching Connectors

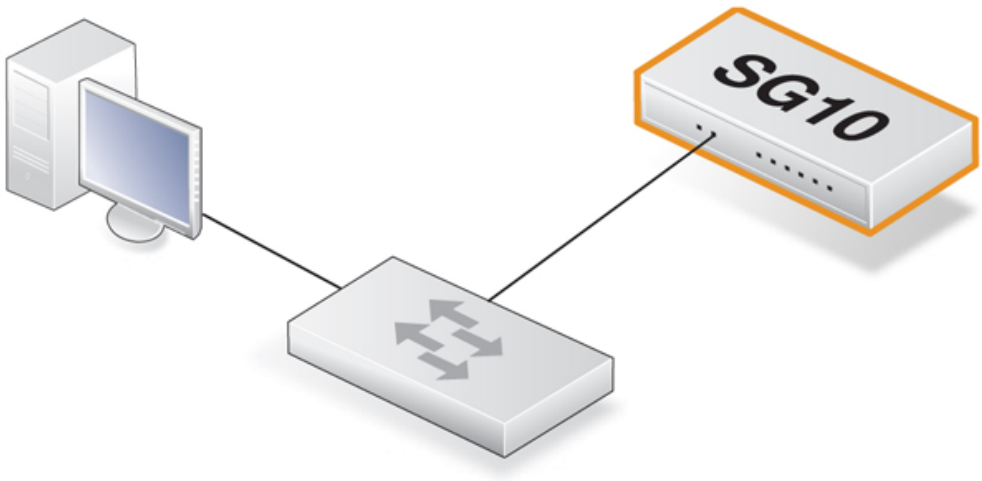
3.1.1. Connecting to a Network

The initial configuration of the SG10 Series device configures which Ethernet interface is to be used for remote management. Any interface can be used for this purpose. The selected interface can also be used for normal traffic.

The intended interface should be attached to the same network as the management server (or a network accessible from the management server via one or more routers).

Connect the interface to a switch or hub in the network using a regular straight-through Ethernet cable as illustrated below.

Figure 3.1. A Typical SG10 Series Installation Setup



The SG10 Series device can be connected directly to the network interface of the management workstation without using any switch or hub, but in that case a crossover cable is required. On the SG10, the **LAN** and **WAN** ports do not require a crossover cable.

3.1.2. Connecting the Console Port

The serial console port is an RS-232 port that enables a connection to a PC or terminal for monitoring and initial configuration of the SG10 Series device. To use the console port, you need the following equipment:

- A terminal or a (portable) computer with a serial port and the ability to emulate a terminal i.e. using the Hyper Terminal software included in most Microsoft Windows installations). The terminal should have the following settings: **9600 baud**, **No parity**, **8 bits**, **1 stop bit** and **No**

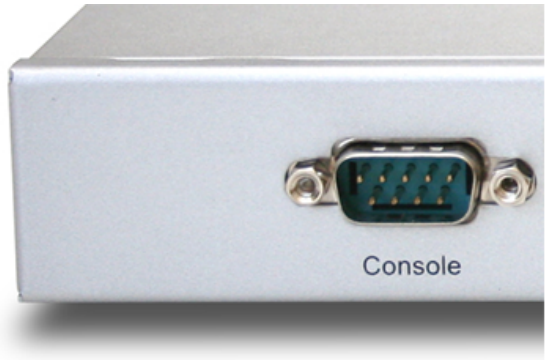
Flow Control.

- An RS-232 cable with appropriate connectors. The SG10 Series package includes an RS-232 null-modem cable.

To connect a terminal to the console port, follow these steps:

1. Set the terminal protocol as described previously.
2. Connect one of the connectors on the RS-232 cable supplied, directly to the console port on the SG10 Series device.

Figure 3.2. The SG10 Console Port



3. Connect the other end of the cable to the terminal or the serial connector of the computer running the communications software.

3.2. Local RS232 Console Setup

Make sure that a terminal (or a computer running terminal emulation software such as Hyper-Terminal) is connected to the console port on the Clavister SG10 Series hardware as described above in Section 3.1.2, “Connecting the Console Port”.

1. Having previously followed the instructions in Section 2.2, “Connecting Power”, the device should now be powered up.

Note

The hardware will require a short amount of time go through it's initial power up sequence and during this period there will be no output to the console.

When the appliance becomes operational, output similar to the following will appear on the console:

```
================================================================
 Select Management Interface
================================================================
This will setup a small base configuration needed for the
system to start, and for remote management of the
Security Gateway to work. When this procedure is finished,
the remaining parts of the configuration may be completed
remotely using the Security Gateway Manager software.

Please choose your management interface
----------------------------------------------------------------


LAN: Switched interfaces Port 1-4
WAN: Fast Ethernet interface 10/100
AUX: Fast Ethernet interface 10/100
----------------------------------------------------------------
ESC Return to previous menu
```

2. Select the interface that you have chosen for communication with the management station. Then press *Enter* to confirm your choice.

3. Enter the IP address you intend to use for the management interface and enter the appropriate netmask and default gateway. It is also possible to specify a remote management network if it is different from the local management interface subnet. Press Ctrl-S to save the settings and continue.

```
================================================================
 Base IP configuration
================================================================
Management Interface:
LAN: Switched interfaces Port 1-4

Use DHCP:            [ ]
Use PPPoE:           [ ]

IP Address:          [192.168.1  .1  ]
Netmask:             [255.255.255.0# ]
Gateway Address:     [   .   .   .   ]   (Leave blank for none)
Allowed Mgmt Net:    [   .   .   .   ]   (Leave blank for local network)
Netmask:             [   .   .   .   ]

NOTE: If this interface is NOT the external interface,
      the gateway address should normally be left blank.
----------------------------------------------------------------
Ctrl-X Exit Without Saving   Ctrl-S Create Configuration file
```

Tip

When entering IP addresses, use the "." (period) key to move the console cursor from one part of the IP address input field to the next.

The *Default Gateway* does not need to be specified if the management workstation is local. If,

however, the management workstation is at least one router hop away from the appliance then the *Default Gateway* needs to be specified so that the appropriate entry is placed in the CorePlus routing table which is otherwise empty. Specifying the *Remote Mangement Net* is also required if the management workstation is not local.

Note
It is possible to use DHCP on the interface.

4. The following will appear in the terminal window:

```
============================================================
  Generating Base Configuration

============================================================
 Writing configuration file, please wait...Done.
 It is recommended to start the core now.
```

Press **Y** to start CorePlus.

5. You will the receive a confirmation message that CorePlus has successfully started as shown below:

```
Configuration done
```

3.3. Finalizing the Configuration

After intial setup, the user should refer to the companion publications found in PDF format on the accompanying CD for information on how to begin to configure the SG10 Series device:

Clavister CorePlus Administrators Guide	This describes the general operation and control of the CorePlus firmware, which is the Clavister proprietary operating system that drives and controls the Clavister SG10 Series hardware. The document includes examples of how to carry out typical adminstrative tasks such as setting up a VPN, and how to use the SG10 Series in various scenarios.
Clavister FineTune Administrators Guide	FineTune is a software tool that provides the principal management interface for the SG10 Series device. The software runs on a Windows based PC workstation and is used by the administrator to manage one or multiple Clavister Security Gateways. This describes how to register your Clavister license and set-up a first security policy.
Clavister CorePlus Log Reference Guide	This documents and describes all log messages that might be generated by CorePlus during operation of the system.

Tip

All current publications can also be downloaded directly in PDF format from from http://www.clavister.com.

Chapter 4. Warranty

Limited Warranty

Clavister warrants to the customer of the SG10 Series Appliance that the Hardware components will be free from defects in material and workmanship under normal use for a period of two (2) years from the Start Date (as defined below). The warranty will only apply to failure of the product if Clavister is informed of the failure not later than two (2) years from the "Start Date" or thirty (30) days after that the failure was or ought to have been noticed by the customer. The warranty will not apply to products from which serial numbers have been removed or to defects resulting from unauthorized modification, operation or storage outside the environmental specifications for the product, in-transit damage, improper maintenance, defects resulting from use of third-party software, accessories, media, supplies, consumables or such items not designed for use with the product, or any other misuse. Any replacement Hardware will be warranted for the remainder of the original warranty period or thirty days, whichever is longer.

Note that the term *Start Date* means the earlier of Product registration or ninety (90) days following shipment from Clavister.

Obtaining Warranty Service

Warranty service may be obtained by contacting Clavister within the applicable warranty period, and requesting a Return Material Authorization (RMA) number. If the product in question has not been registered with the Clavister client web pages, then a proof of purchase (such as a copy of the dated purchase invoice) must be provided. If Purchaser's circumstances require special handling of warranty correction, then at the time of requesting the RMA number, the Purchaser may also propose special procedures as may be suitable to the case.

After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be clearly marked on the outside of the package. The package must be mailed or otherwise shipped to Clavister with all costs of mailing/shipping/insurance prepaid. Clavister shall not be responsible for any of the Purchaser's software, firmware, information, or memory data contained in, stored on, or integrated with any product returned to Clavister pursuant to this warranty.

Any package returned to Clavister without an RMA number will be rejected and shipped back to the Purchaser at the Purchaser's expense. Clavister reserves the right in such a case to levy a reasonable handling charge in addition to mailing and or shipping costs.

To issue an Return Material Authorization (RMA) request for warranty or maintanence service for any Clavister appliance product, please fill out the Clavister RMA request form which can be found and submitted online at (clickable link):

http://www.clavister.com/support/support_rma_request.html

Should there be a problem with the online form then Clavister support can be contacted by email at: **mailto:support@Clavister.com**.

The mail address is:
Clavister AB
Torggatan 10
891 27 ÖRNSKÖLDSVIK
SWEDEN

Details of the software procedures to follow when installing new hardware can be found in the FineTune guide.

Customer Remedies

Clavister's entire liability according to this warranty shall be, at Clavister's option, either return of the price paid, or repair or replacement of the Hardware that does not meet Clavister's limited warranty and which is returned to Clavister with a copy of your receipt.

Limitations of Liability

Refer to the legal statement at the beginning of the guide for a statement of liability limitations.

Chapter 5. Safety

Safety Information

Clavister SG10 Series devices are safety class I products and have protective ground terminals. There must be an uninterrupted safety earth ground from the main power source to the product's input wiring terminals, power cord, or supplied power cord set. Whenever it is likely that the protection has been impaired, disconnect the power cord until the ground has been restored.

For LAN cable grounding:

- If your LAN covers an area served by more than one power distribution system, be sure their safety grounds are securely interconnected.
- LAN cables may occasionally be subject to hazardous transient voltage (such as lightning or disturbances in the electrical utilities power grid). Handle exposed metal components of the network with caution.

There are no user-serviceable parts inside these products. Only service-trained personnel can perform any adjustment, maintenance or repair.

Säkerhetsföreskrifter

Dessa produkter är säkerhetsklassade enligt klass I och har anslutningar för skyddsjord. En obruten skyddsjord måste finnas från strömkällan till produktens nätkabelsanslutning eller nätkabel. Om det finns skäl att tro att skyddsjorden har blivit skadad, måste produkten stängas av och nätkabeln avlägnas till dess att skyddsjorden har återställts.

För LAN-kablage gäller dessutom att:

- om LAN:et täcker ett område som betjänas av mer än ett strömförsörjningssystem måste deras respektive skyddsjord vara ihopkopplade.
- LAN kablage kan vara föremål för farliga spänningstransienter (såsom blixtnedslag eller störningar i elnätet). Hantera metallkomponenter i förbindelse med nätverket med försiktighet.

Det finns inga delar i produkten som kan lagas av användaren. All service samt alla justeringar, underhåll eller reparationer får endast utföras av behörig personal.

Informations concernant la sécurité

Cet appareil est un produit de classe I et possède une borne de mise à la terre. La source d'alimentation principale doit être munie d'une prise de terre de sécurité installée aux bornes du câblage d'entree, sur le cordon d'alimentation ou le cordon de raccordement fourni avec le produit. Lorsque cette protection semble avoir été endommagée, débrancher le cordon d'alimentation jusqu'à ce que la mise à la terre ait été réparée.

Mise à la terre du câble de réseau local:

- si votre réseau local s'étend sur une zone desservie par plus d'un système de distribution de puissance, assurez-vous que les prises de terre de sécurité soint convenablement interconnectées.
- Les câbles de réseaux locaux peuvent occasionnellement être soumis à des surtensions transitoires dangereuses (telles que la foudre ou des perturbations dans le réseau d'alimentation public). Manipulez les composants métalliques du réseau avec précautions.

Aucune pièce contenue à l'intérieur de ce produit ne peut être réparée par l'utilisateur. Tout

dépannage, réglage, entretien ou réparation devra être confié exclusivement à un personnel qualifié.

Hinweise zur Sicherheit

Dies ist ein Gerät der Sicherheitsklasse I und verfügt über einen schützenden Erdungsterminal. Der Betrieb des Geräts erfordert eine ununterbrochene Sicherheitserdung von der Hauptstromquelle zu den Geräteingabeterminals, den Netzkabeln oder dem mit Strom belieferten Netzkabelsatz voraus. Sobald Grund zur Annahme besteht, dass der Schutz beeinträchtigt worden ist, das Netzkabel aus der Wandsteckdose herausziehen, bis die Erdung wiederhergestellt ist.

Für LAN-Kabelerdung:

- Wenn Ihr LAN ein Gebiet umfasst, das von mehr als einem Stromverteilungssystem beliefert wird, müssen Sie sich vergewissern, dass die Sicherheitserdungen fest untereinander verbunden sind.

- LAN-Kabel können gelegentlich gefährlichen Übergangsspannungen ausgesetz werden (beispielsweise durch Blitz oder Störungen in dem Starkstromnetz des Elektrizitätswerks). Bei der Handhabung exponierter Metallbestandteile des Netzwerkes Vorsicht walten lassen.

Dieses Gerät enthält innen keine durch den Benutzer zu wartenden Teile. Wartungs-, Anpassungs-, Instandhaltungs- oder Reparaturarbeiten dürfen nur von geschultem Bedieningspersonal durchgeführt werden.

Considerazioni sulla sicurezza

Questo prodotte è omologato nella classe di sicurezza I ed ha un terminale protettivo di collegamento a terra. Dev’essere installato un collegamento a terra di sicurezza, non interrompibile che vada dalla fonte d’alimentazione principale ai terminali d’entrata, al cavo d’alimentazione oppure al set cavo d’alimentazione fornito con il prodotto. Ogniqualvolta vi sia probabilità di danneggiamento della protezione, disinserite il cavo d’alimentazione fino a quando il collegaento a terra non sia stato ripristinato.

Per la messa a terra dei cavi LAN:

- se la vostra LAN copre un’area servita da più di un sistema di distribuzione elettrica, accertatevi che i collegamenti a terra di sicurezza siano ben collegati fra loro;

- i cavi LAN possono occasionalmente andare soggetti a pericolose tensioni transitorie (ad esempio, provocate da lampi o disturbi nella griglia d’alimentazione della società elettrica); siate cauti nel toccare parti esposte in metallo della rete.

Nessun componente di questo prodotto può essere riparato dall’utente. Qualsiasi lavoro di riparazione, messa a punto, manutenzione o assistenza va effettuato esclusivamente da personale specializzato.

Consideraciones sobre seguridad

Este aparato se enmarca dentro de la clase I de seguridad y se encuentra protegido por una borna de puesta a tierra. Es preciso que exista una puesta a tierra continua desde la toma de alimentacíon eléctrica hasta las bornas de los cables de entrada del aparato, el cable de alimentación hasta haberse subsanado el problema.

Puesta a tierra del cable de la red local (LAN):

- Si la LAN abarca un área cuyo suministro eléctrico proviene de más de una red de distribución de electricidad, cerciorarse de que las puestas a tierra estén conectadas entre sí de modo seguro.

- Es posible que los cables de la LAN se vean sometidos de vez en cuando a voltajes

momentáneos que entrañen peligro (rayos o alteraciones en la red de energía eléctrica). Manejar con precaución los componentes de metal de la LAN que estén al descubierto.

Este aparato no contiene pieza alguna susceptible de reparación por parte del usuario. Todas las reparaciones, ajustes o servicio de mantenimiento debe realizarlos solamente el técnico.

Chapter 6. Hardware Specifications

Below are the key hardware specifications for Clavister SG10 Series installation.

Figure 6.1. SG10 Series Dimensions and Weight

Height x Width x Depth (mm)	30 x 240 x 160
Device weight	1.1 kg
Device form Factor	Desktop
Power Supply (AC)	100-240V 50 to 60 Hz AC

Figure 6.2. Regulatory and Safety Standards

Safety	UL, CE
EMC	FCC class A, CE class A

Figure 6.3. Environmental

Humidity	20% to 95% noncondensing
Operational Temperature	5 to 55° C
Vibration	0.41 Grms2 (3-500 Hz)
Shock	30 G

Figure 6.4. Power Specifications

Typical Consumption (W)	16 W
Typical Current @ 230V	70 mA
Typical Current @ 110V	145 mA
BTU	55 BTU
PSU Rated Power (W)	20 W

Further information

For complete product specifications refer to (clickable link):

http://www.clavister.com/products/