DRAGON STRAND

CAGING SYSTEMS FOR CHAMELEONS AND OTHER ARBOREAL REPTILES

# MEDIUM ATRIUM CAGE ASSEMBLY AND APPLICATION NOTE

*Welcome to the Dragon Strand family of caging systems. Here you will find systems for all stages of the life of your mini tree-dragon friend from hatchling to adult. You'll find rack compatible enclosures and stand-alone caging. You can choose from full screen for maximum ventilation to solid walls for retaining mist and humidity.*

*Your Medium Atrium Cage will either be all screen or have three clear PVC sides. This assembly and application note works for both.*

*website: http://dragonstrand.com*
*email: bill@dragonstrand.com*

# Introduction

Dragon Strand is more than a caging company. It was started as an integral part of a vision that we in the chameleon community could have beautiful naturalistic enclosures for both our enjoyment and our chameleons' health. We can do so much better than just a plant in a cage. Our chameleons need and deserve better. For this to happen the community required both the tools and education to reach higher. Through Dragon Strand, tools specifically for the chameleon community are developed and made available. And through application notes like this, creativity for making beautiful cages is shared. But more than just a step-by-step guide for the Medium Atrium Enclosure, these are principles that can be used with any cage.

You may follow along step-by-step and create a similar set-up. My hope, though, is that this is a catalyst for your creativity and just a stepping off point for you to design and share even better cages in the future. By building on what each other shares we grow stronger as a community and our collective chameleon husbandry advances.

This application note uses the Dragon Strand Medium Atrium Enclosure as a base. The Medium Atrium is in a horizontal format. It comes standard as a bundle with both the patented Dragon Ledges (anchors for a screen wall) and a drainage tray with Drip-easy screen floor. The Medium Atrium comes in both screen and Clearside versions. This application note will work for either version.

The cage design we are building towards is a display cage commissioned by Kammerflage Kreations for a reptile show in 2016 to showcase their beautiful Ambilobe panther chameleon breeder, Manga-hay. This design is appropriate for any age Panther Chameleon or like sized chameleon species.

# Getting to Know Your Medium Atrium Enclosure

## Welcome!

The Medium Atrium Enclosure was designed to be a wide format cage that would be able to house a Panther, Veiled, or Jackson's Chameleon from baby through adulthood. This assembly and application note will lead you through the construction of the cage itself and then show the steps taken to turn the bare cage into a centerpiece display.

### *Wide Format Cage Style*

Chameleons may live high, but they move horizontally. Design with longer sticks in mind and place the cage so the top is above your head level.

### *Rust Proof Construction*

All pieces in the construction are either aluminum, stainless steel, or plastic. Dragon Strand cages are designed for long term use.

### *Dragon Ledges*

Your cage comes standard with five patented Dragon Ledges. These are solid anchors that will allow you to mount horizontal and vertical branches as well as live potted plants. You are able to place these at any level. It is the Dragon Ledges that are key to allowing us to create a floating garden type design that looks beautiful and keeps the floor of your cage clear and easy to clean.

### *Flip-up Service Door*

A bottom access door flips up and allows you to remove the floor panel for cleaning with minimal disturbance to the occupants of the cage.

### *Drainage Tray Included*

A water tight drainage tray is included. The cage sits on top and water will flow into the tray. The waste water is out of reach of the chameleon and any escaped feeders.

### *Interchangeable floor*

The bundle includes both a white solid PVC floor and a screen floor. Both are simply slid in (or out) through the Service Door to rest on top of the bottom frame. Which one you use is up to your cage design and the other can serve as a back up.

# Assembling Your Medium Atrium Enclosure

## Welcome!

To prepare to assemble your cage gather the following tools:

1) Scissors to cut packing material
2) Phillips head screw driver to assemble cage
3) Bowl to hold screws
4) Masking tape for holding Dragon Ledges during installation is optional

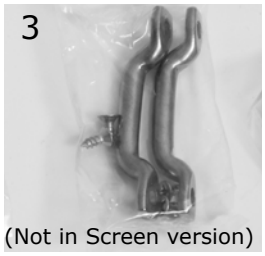
## Parts List:

Cage Panels:
(A) Back Panel
(B) Right Panel (with hinges)
(C) Bottom Frame
(D) Left Panel (with latch tabs)
(E) Top Panel
(F) White Plastic Floor Panel
(G1) Upper Face Panel
(G2) Service Door
(H) Main Door

Hardware:
(1) Bag of Cage Screws
(2) Vine Holders
(3) Door handles (Clearside only)

Drainage Tray Box:
Drainage Tray
Drip Easy Screen Floor Panel

Dragon Ledges:
4 * 18" Back Brace
1 * 31" Back Brace
5 * Spacer
5 * Ledge
Bag of Dragon Ledges screws

(Not in Screen version)


Before starting the build there are a few things to keep in mind.

**Caution 1: Do not over-tighten screws!** Tighten the screw until it is fully, and tightly seated in the frame. But then stop. Tightening the screw beyond this point will strip the hole and make it unusable.

**Caution 2:** Beware of slipping with the screwdriver and punching a hole in the screen or clearside material. Tighten the screws firmly and deliberately, but do not rush yourself or press harder than necessary.

**Success Hint 1:** Open a screw bag only when it is required and empty the screws into a bowl to keep from losing them. Given the chance they will scatter and hide under furniture and in other places impossible to reach. That is just the way it works.

**Success Hint 2:** Save the packing boxes for a convenient work platform that will avoid scratching your cage or other work surface. The box is especially useful if you plan on adding in the Great Stuff foam background.

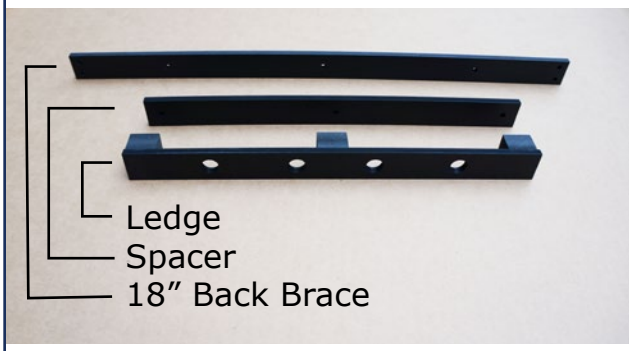
**Assembly Note 1:** Except for the (C) Bottom Frame, the panel side with the sticker goes on the inside of the cage.

**Assembly Note 2:** Rattling inside a cage frame is normal and can be ignored. This is the pop rivet end and does not affect function.

# Installing Dragon Ledges

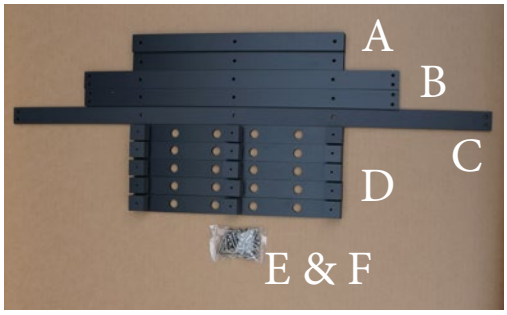
The Dragon Ledges are easiest to install before the cage is assembled. If you cage is already assembled you follow the same steps, but the execution may be a little more challenging. In this assembly note I will demonstrate installation before the cage sides are attached to each other.

**Warning:** Care must be taken in all steps as slipping with a screw driver or any other tool may cause damage to the cage. If done carefully and slowly, installation should be able to be accomplished with no damage or scratches. Screws may be driven directly into the aluminum frame with a firm pressure. If you have any doubt as to your ability to do this without slipping then create pilot holes through only the first layer of the frame using a drill bit smaller in diameter than the screw.

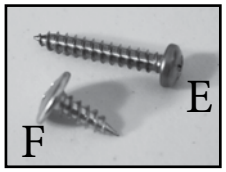



**Anatomy of a Dragon Ledge**

Each Dragon Ledge is made up of three parts. The back brace attaches to the aluminum frame on the outside of the cage and will be the main load bearing component. The Spacer takes up the space between the screen and the Back Brace. The Ledge goes on the inside of the cage and sandwiches the screen between the Ledge and the Spacer. There will be three screws that hold the assembly together. Those three screws will go through the screen (or clear PVC). But those holes will be hidden. Dragon Ledges are meant to be a permanent addition to a cage and there is no reason to remove them in the future.




**Contents.** Included are 5 Dragon Ledges.




| | |
|---|---|
| Qty: 5 | (A) Screen Spacer |
| Qty: 4 | (B) 18” Back Brace (For Sides) |
| Qty: 1 | (C) 30” Back Brace (For Back) |
| Qty: 5 | (D) Ledge |
| Qty: 15 | (E) Long Screw |
| Qty: 20 | (F) Short screw |

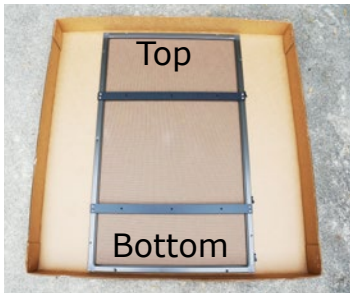
## Placing Dragon Ledges

The Medium Atrium comes with five Dragon Ledges. There are two for each side and one for the back. *Note: Dragon Ledges are designed to be placed on the sides and back. They are not designed to be mounted on the top panel. They do not have strength in this direction.*

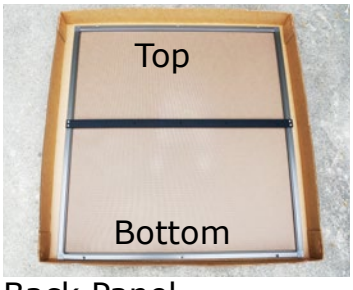
Your Dragon Ledges come so that you can place them at what ever height best suits your design. The easiest placement, and the one we will use today, is for the two side panels to be divided, roughly, into thirds and the back panel to have the Dragon Ledge go across the middle.

In this build I will be using a technique that gives us the ability to mount branches at any level regardless of Dragon Ledge placement so do not get worried about the exact level that you have the Dragon Ledges.

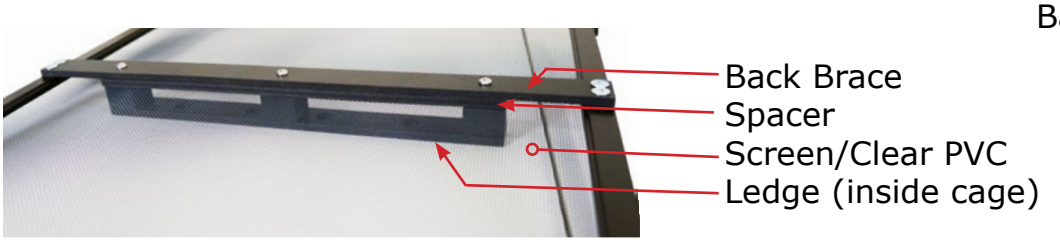
When placing the Back Braces be careful that they do not interfere with any pre-drilled screw holes, hinges, or closure tabs. Mount the Back Brace as horizontal as possible for the strongest attachment. If you would like help keeping the back brace in place while you get ready to screw it in you can use masking tape to hold it. The Back Brace goes on the outside of the cage panel. An easy way to tell is that the panel label stickers are on the inside. The Back Brace goes on the side that does NOT have a sticker



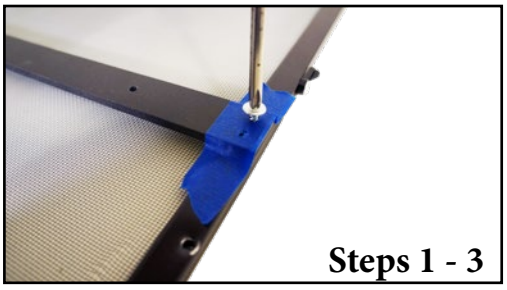
Side Panel



Back Panel

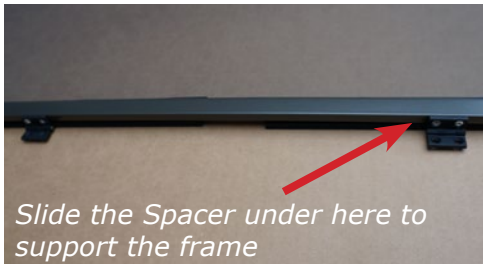


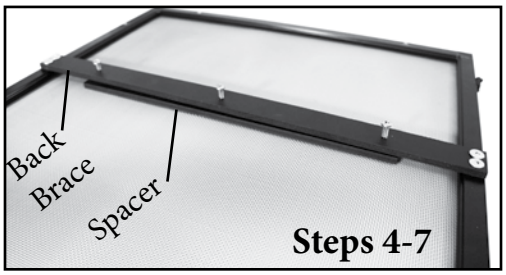
# Installing Dragon Ledges, cont...

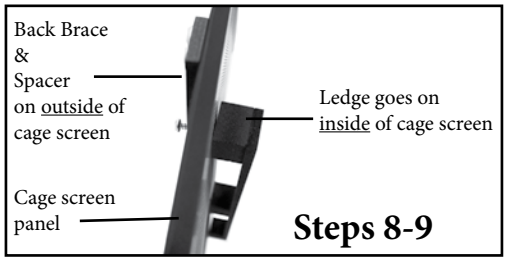


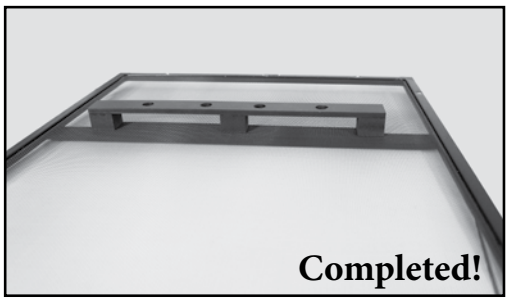

1. Once you are happy with placement, use a Phillips head screw-driver, pen, or any other small object to open a hole in the tape for the Back Brace mounting hardware. (If you used tape to hold the Back Brace)
2. Insert the short screw into the hole as much in the center of the mounting hole as possible. Press gently, but firmly on the short screw and twist the screw into the frame. Drive the screw in a couple of turns to firmly lodge it and then carefully remove the masking tape from around the screw and Back Brace.
3. Continue to drive the screw in until it is tight. **Do not over tighten the screw as you will strip the aluminum framing.**

Hint: Do the side panel (B) that has the hinges attached first. When working on this side panel you will notice that the hinges are not flush with the frame when laid down. The panel ends up being supported off the floor by the hinges. To make sure that the hinges do not take the full force of you driving screws into the aluminum frame, slide one of the unused Spacers underneath the frame by the hinges as a support while you screw on the Back Brace.



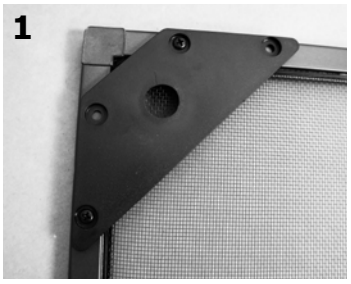



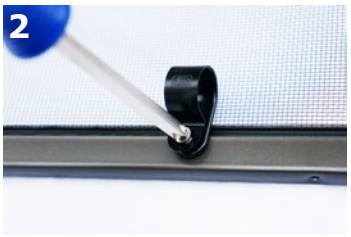

4. Drive in the second mounting screw.
5. Repeat steps 3 through 7 for the other side
6. Slip in the Screen Spacer between the Back Brace and the screen. Hold it in place by dropping long screws into the three holes across the middle of the Back Brace. Align the Screen Spacer so the screws go into the three pre-drilled holes along the length of the Screen Spacer. The tips of the screws will now be against the screen.
7. Carefully push the tip of first long screw against the screen (or clear PVC), bring the Ledge into place from the **inside** of the cage, and align the screw with the pre-drilled hole in the Ledge footing. I gently move the ledge around until I feel the tip of the screw slightly fall into the pre-drilled hole. Screw half way to save the place.
8. Repeat step 7 with the other two long screws and then fully tighten all screws.
9. Your Dragon Ledge is installed. Repeat for your other Dragon Ledges!

Dragon Ledges may be installed on the cage after it is assembled if you are not able to get them on before assembly. This usually happens with enthusiastic cage builders and is just fine. The steps are the same. The only difference is that you need to hold the Back Brace in place for that first screw. This is where masking tape can come in handy. You also do not have the benefit of a solid surface behind the cage panel when you attempt to start the screw. Please take extra caution when installing Dragon Ledges on an already assembled cage.

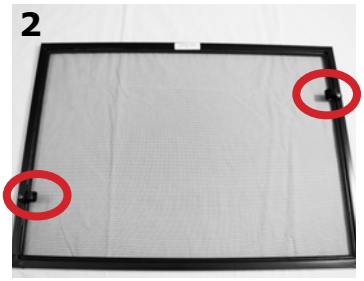
# Assembling the Medium Atrium Enclosure




**1) Attach Misting Nozzle Hardware**
Misting nozzle mounting hardware must be purchased from the misting nozzle manufacturer. If you are using a misting system and are using a support wedge it is much easier to install it before the cage is assembled. Note: the wedge may cover one of the Vine Holder pre-drilled holes. In this case you can just create another vine holder location.
The misting nozzle mounting plate is designed to go in the corners of screen cages. In this build I want my misting nozzle to be in the middle of the front. If you would like to do this yourself see the water section for where to drill the holes.




**2) Attach Vine Holders:** These attach to the top panel (E) and will provide a convenient anchor to loop artificial vines. Find the two pre-drilled holes on the Top Panel (E) and attach the vine holders using the screws included in the vine holder bag. If one of the pre-drilled holes is covered by a misting nozzle mounting wedge then you have to option of leaving that vine holder off or placing the vine holder in another location and firmly screwing it in place using the self-tapping screw.




**3) Cage Core**
Construct cage core with Back Panel (A), Top Panel (E), and Bottom Frame (C). Use 3/4" screws from cage screw bag. Bottom Frame sticker is on outside. Other panels are installed with stickers on inside.

**4) Side Panels**
Add Side Panels (B) and (D) with 3/4" screws. Stickers are on the inside top of the panel. Attach to Top Panel (E) first to avoid the sides slipping and possible screen/clear PVC damage to Top Panel.


**5) Front**
Complete Front by first installing Lower Panel (G2) with two 3/4" screws from the sides. The Lower Panel has the handle.
Install the Upper Face Panel (G1) with four 3/4" screws.
Lay the Door (H) in and use four flathead 1/4" screws to attach to hinges.

**6) Door Handles**
For Clearside versions only - Attach door handles to the (H) Main Door and (G2) Service Door. (For the screen version the door handles are already on.)

**7) Floor Panels**
When you elect to insert the floor panels, select either the white PVC panels or the screen floor panel (not both) and slide it on top of the bottom frame.




# Parts List

| Qty | Item | Where I got it | Link |
|---|---|---|---|
| 1 | Medium Atrium Enclosure, (Screen or Clearside) | Dragon Strand | http://dragonstrand.com/product/medium-atrium-screen-drip-easy-drainage-tray-dragon-ledges/ |
| 1 | 36" Quad T5  HO with 6% UVB | Light Your Reptiles | http://www.lightyourreptiles.com/hot-t-5-36-quad-fixture-w-arcadia-6-bulb-3-x-daylight-bulbs-built-in-timer/ |
| 1 | 5.5 " Deluxe Porcelain Clamp Lamp | Kammerflage Kreations | http://www.chameleonsonly.com/products/Zoo_Med_5_5_Deluxe_Porcelain_Clamp_Lamp-66-7.html |
| 1 | 50 or 75 Watt Reptile Basking Lamp | Kammerflage Kreations | http://www.chameleonsonly.com/products/Basking_Lamps-68-7.html |
| 1 | CliMist Cyclone Misting System | Cli-Mist | https://www.climist.com/climist-cyclone-misting-system.html |
| 1 | CliMist Nozzle Mounting Plate (verify is part of your package) | Cli-Mist | https://www.climist.com/climist-mounting-plate.html |
| 1 | Zoo Med The Big Dripper, Gallon | Amazon | search amazon.com |
| 1 | 4*27.5" Chameleon Branch Bundle | Kammerflage Kreations | Call (951) 738-8388 for help |
| 1 | 4*25" Chameleon Branches Bundle | Kammerflage Kreations | Call (951) 738-8388 for help |
| 1 | Flexible Hanging Vine - Artificial | Kammerflage Kreations | http://www.chameleonsonly.com/products/Flexible_Hanging_Vine_Artificial-63-7.html |
| 1 | Large Exo Terra Jungle Vine | Kammerflage Kreations | Call (951) 738-8388 for help |
| 1 | 4" Feeder Cup | Full Throttle Feeders | https://www.fullthrottlefeeders.com/product-page/magnetic-camo-feeder-cup |
| 1 | 1 gallon *Epipremnum aureum* (Pothos) | Home Improvement Store | Indoor plant department |
| 1 | 3" *Schefflera arbicola* (Umbrella Plant) | Home Improvement Store | Indoor plant department |
| 1 | 4" *Pachira aquatica* (Money Tree Plant) | Home Improvement Store | Indoor plant department |
| 1 | 4" *Hypoestes phyllostachya* (polka-dot plant) | Home Improvement Store | Indoor plant department |
| 3 | baby plants taken from mother Spider Plant | Established plant | Home Improvement Store  Indoor plant department |
| 3 | Great Stuff Pond & Stone, 12oz (optional) | Amazon or Ace Hardware | search amazon.com |
| ~30 | Black, 7" Zip Ties (AKA Tie Wraps) | Home Improvement Store | https://www.homedepot.com/p/Catamount-7-in-30-lb-Twisttail-Cable-Tie-Black-50-Pack-TT-7-30-0-L/203423317 |
| bag | drainage pebbles | Home Improvement Store | personal selection |
| bag | soil for plants | Home Improvement Store | personal selection |
| bag | Pebbles for surface (optional) | Home Improvement Store | personal selection |
| 2 | 1 Gallon Black pot for main foliage plant | Home Improvement Store | personal selection |

# Tools List

| Item | What for | Where I got it | Note |
|---|---|---|---|
| Scissors | Cutting open packing material for Cage assembly | Office Supply | |
| Phillips' Head Screw driver | Cage assembly | Home Improvement Store | Best to use hand screw driver. it is very easy to strip holes if you use an electric screw driver - not good. |
| Bucket Head wet/dry vacuum | Emptying drainage tray method 1 | Home Depot | |
| Crevice tool | Emptying drainage tray method 1 | Home Depot | |
| Electric Screw driver | Making holes in stuff | Home Improvement Store | |
| 1/8" drill bit | Drill drainage holes in white PVC floor | Home Improvement Store | Only if you use the white PVC floor instead of the Drip Easy screen floor |
| 7/32" drill bit | Drill holes in pots for zip ties | Home Improvement Store | Check size against your zip ties! |
| 1/4" tubing for drainage lines | Foaming around drainage line | Home Improvement Store | Optional: only if you need drainage for foam pots |
| Knife | Carving Great Stuff | Home Improvement Store | Optional: only if you intend to do foam carving |
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# Plants & Branches

## Plants

The plants you use will depend on what is available to you in your area. Home Improvement stores are a great resource for plants. This is the list of what was used in this build.
Main foliage plant: 1 gallon *Epipremnum aureum* (Pothos or Devil's Ivy)
4" *Hypoestes phyllostachya* (polka-dot plant)
4" *Pachira aquatica* (Money tree)
3" *Schefflera arbicola* (Umbrella Plant)
Baby *Chlorophytum comosum* (Spider plants) taken from a mature clump

*Epipremnum aureum*
Pothos or Devil's Ivy

*Hypoestes phyllostachya*
Polka-dot Plant

*Schefflera arbicola*
Umbrella Tree

*Pachira aquatica*
Money Tree

*Chlorophytum comosum*
Spider Plant

Although I always have a basic strategy behind my cage designs, the placement of items is greatly driven by the plants I am able to find at the time and want to incorporate. If you cannot find the exact plants then do not worry. You will adjust your placement and plant composition to match what you have.

Your plant design will also dictate which of the two included floors you will use. The white PVC floor is good for designs that have a potted plant on the floor and benefit from increased support. The screen floor is used in designs that have the plants mounted along the sides with the Dragon Ledges like the design we are working with today. The screen floor is effective in making plants appear to be floating as the floor visually "disappears".

Note that all of these plants will outgrow the cage. Even the Polka-dot Plant will become a respectable bush. This means that if you do your job right with light and water you will have trimming chores throughout the year. If your plants are not growing or are growing "stringy" then there is an issue with light and/or water that must be addressed.

## Branches

Branches for your cage can be found anywhere. There is great discussion in the community regarding the level of potential danger in doing this. I have never had a problem using "wild" branches, myself. If you have no desire to form an opinion on this yet or just want the simplest solution, Kammerflage Kreations offers sanitized, sanded, and specially prepared branches for chameleon cages. This Medium Atrium Enclosure that I am building in this application note uses the branches and vines available from Kammerflage. Kammerflage Kreations offers two branch bundles specifically cut to fit the Medium Atrium. I used one package of 4*27.5" Chameleon Branches for the horizontal perching branches and one package of 4*25" Chameleon Branches for the vertical supports.

# Setting up Your Medium Atrium Enclosure

## Section 1: Gradient Strategy

We need to touch on the basics of what we are trying to accomplish. We will need to incorporate gradients and micro climates to give our chameleon choices.

## Section 2: Light & Water

For life to thrive in our enclosure we must add light and water. Our light selection will also take care of heat and UVB. Water keeps chameleons healthy and plants happy!

## Section 3: Drainage

A living system needs water flowing in. It, inevitably, must also flow out. A drainage tray takes care of the excess water.

## Section 4: Dragon Ledges Connections

The Dragon Ledges give you great flexibility in your internal landscaping. In this section various ways of connecting branches to the Dragon Ledges is shown.

## Section 5: Branching

Branches are our chameleon's roads and give him access to what we have set up in the cage. Branching also provides solid mounting for potted plants.

## Section 6: Potting

Installing potted plants on the sides of a screen cage takes a little bit of planning. I will share my experienced in how to arrange and firmly secure potted plants.

## Section 7: Working With Great Stuff

Adding expanding foam makes for our pots looking like a rock face. This encourages the naturalistic feel for your enclosure. But this does nothing for the chameleon. It is all cosmetic for our eyes. You do not need to do this part.

## Section 8: Great Stuff Application

If you like the look that the expandable foam produces then this optional step shows how to apply and design with it.

## Section 9: Add Plants

Plants are the life for the environment. There is no better chameleon cage than one that is dynamically alive before it even has a chameleon in it!

## Section 10: Final Touches

We finish up with flexible, artificial vines and decide on the right floor panel.

# Section 1: Gradient Strategy

Before we start putting items in the cage there is some strategy to consider and it is well worth the time to plan it out. The plan must be flexible, but a general plan ensures we get the important points.

The basic structure of a cage is that there is one section which will be heavily planted. This heavily planted area will provide an area your chameleon can hide to feel secure, a humidity pocket, and protection from the UVB light. The most important part of this section is a very leafy main foliage plant. *Epipremnum aureum*, commonly known as Pothos or Devil's Ivy, is a natural choice because of its hardiness, trailing nature, and large leaves. It is readily available as a house plant around the world. A live plant is much more effective than a fake plant for this purpose because live plants transpire, which means that during daylight hours they release water vapor into the air. We will use this as a component to our humidity pocket.

The other side is clear and in the open. It is here your chameleon will warm itself, get UVB exposure, and eat.

I am designating the right side (looking from the front of the cage) of the cage as the heavily planted area. I choose the right side because the door opens on the left and, thus, the right side will provide more security for your chameleon. In the Clearside version the left side is screen and the right side is the clear PVC so, in that version, the right side is much more effective in creating a humidity pocket. I also like the side that the door opens on to be clear as I like to use it to release feeders to run up the wall. This way I can crack the door open just enough to get my hand with the feeder in and release it with the least amount of invasion in my chameleon's territory. And this is the reason why, in the Clearside versions, the screen side is always on the side the door opens!

Since our heavily planted area is on the right hand side the heat lamp will be in the back left corner. We will want a perching branch leading from fully under the bulb to deep into the plant cover. Of course, this does not have to be accomplished by just one branch.

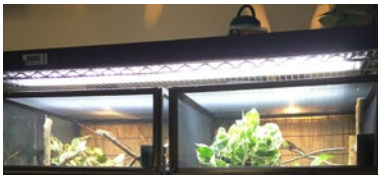
**Dry, open basking area under heat lamp**

**Maximum heat basking spot**

**Cool, hidden, humid area behind leaves**

# Section 2: Light & Water

## Light



Quad T5 High Output systems provide excellent lighting

**Daylight.** Chameleons need light. Heavily planted cages are excellent for making sure you provide enough light. Your goal is to have your plants thrive and have trimming be a regular maintenance item. If your plants get stringy it is a sign of insufficient light. I use quad T5 high output bulbs. Three of those bulbs are 6500K "daylight" bulbs. One bulb is an Arcadia 6% UVB bulb. I purchased my lighting from Todd Goode at LightYourReptiles.com. Todd offers a 36" fixture with feet that fits nicely on the Medium Atrium and he has always been an active help to the chameleon community.

This quad T5 HO Light fixture comes with an integrated timer that controls two banks of lights and one set of blue LEDs

**UVB.** I am using a T5 HO 6% UVB bulb. Since this is a horizontal format cage be mindful that a heavily planted perching area that hides your chameleon from the UVB is very important. I have two horizontal perching branches giving different UVB exposure. I target a UVI of 3 to 6. When placed directly on the screen top, this fixture and bulb will give you 3 at 2" below the screen and 2 at 3.5" below the screen. By 7" it is down to 1. If your basking branch is not directly underneath the UVB index is lower.

**Heat.** The heat lamp I use is a 75 Watt ZooMed Reptile basking bulb. A simple incandescent bulb from any home improvement store will work, but to produce an application note I needed a bulb that would give consistent results no matter who was reading this. A 75 Watt ZooMed basking bulb will give sufficient heat for a panther chameleon. I am using a 5.5" reflective clamp light to hold my basking bulb. **When buying a reflector make sure it is rated at a higher wattage than your bulb.** I have the heat bulb paced on the opposite end of the main foliage plant. Be very careful that the heat lamp is not hot enough to burn your chameleon. This is especially a concern for veiled chameleons. For veiled chameleons, do not rest the heat lamp on the top of the cage. The temperature that the casque receives is much higher than what the body is getting and they measure their basking time by their body temperature. That means the casque is being exposed to a greater heat.

## Water

My watering strategy will include both an automatic mister and a dripper. The mister is great for wetting down a wide area and can simulate morning dew and a rain shower. I want the option of providing hydration without drenching the cage so I will also employ a dripper. A dripper allows me to give hydration through the day while keeping the cage dry and allows me to specifically target plants that need watering. An automatic misting system is a critical tool for chameleon husbandry because it will go off every day and ensure your chameleon has hydration whether you are there and remember to set up the dripper or not. But dousing the cage multiple times a day can introduce problems as a constantly wet environment encourages growth of organisms that could pose a health risk. For an ideal hydration schedule an ultra-sonic humidifier would simulate a fog bank rolling through during the dark morning hours.

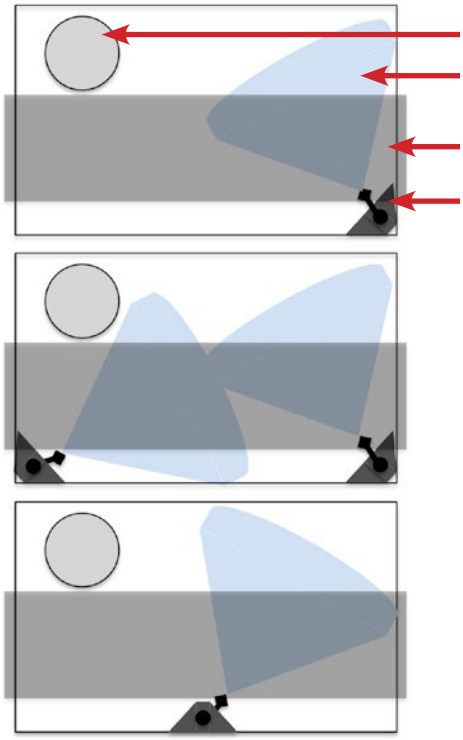
**Mister.** I will be using a misting system with one nozzle and a dripper to provide hydration needs. The nozzle can be placed in the front right corner so it will douse the heavily planted area. I will move the dripper around to different areas each day to make sure each plant gets watered enough. The mister nozzle will probably not be sufficient for my planted area and definitely won't help any accent plants I place outside the "forest". An alternative nozzle placement is in middle front. But this requires drilling two extra mounting holes and it is tricky both in placing them correctly and holding the wedge in place! Although it takes extra work, placing it in the middle front and pointing it towards the main foliage plant provides a much better misting coverage.


**Dripper.** Always place large drippers so that they are supported by the top frame of the cage. The screen will hold for a certain weight, but only if you use a small dripper. You can always place supports on the frame that will hold the dripper in place without putting stress on the screen. One quick support I used was to get a yard stick, cut two appropriate sized pieces, and spray paint it black. I will move my dripper around the cage to make sure each plant gets watered at least once a week. Make sure the water drops hit leaves that are within reach of the chameleon. Keep this in mind when you set up branching. And, finally, with all the water drops bouncing off the leaves make sure the dripper is placed so that some of them hit the soil as well!

# Section 2: Light & Water Set-up and Timing

## Set-up diagrams

Top View of Medium Atrium



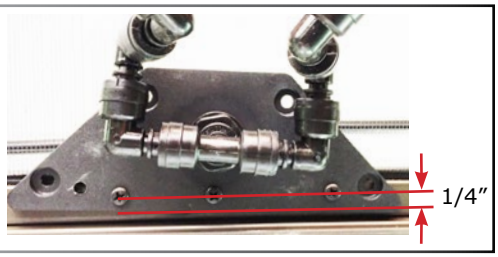

Each of these diagrams shows an effective placement of equipment on the top of the cage. These diagrams are from the top view.

**Single Mister Strategy.** If you have only one mister then the top right corner(when viewing the cage from the front) is a good place for it as, in this design, our main foliage plant will be on the right side.

**Dual Mister Strategy.** If you have a need for more mist in the cage a second mist head may be installed in the left front corner as well. Point this backwards towards the main foliage plant. Avoid sending mist in the direction of the heat lamp. Your main goal with the misters is to coat the plant leaves with water droplets for drinking.

**Single Side-mount Strategy.** In this design I have elected to go rogue and drill my own holes. By drilling holes as shown below you are able to mount the misting nozzle anywhere along the top. The advantage in this placement is superior coverage of the main foliage plant.

To create a side-mounted misting wedge drill two or three 3/16” holes at precisely 1/4” from the edge. It is a tight fit to get screw space on the frame without blocking the nozzle nut. This wedge may then be installed anywhere along the top frame.




## Timing and the Day’s Schedule

The quad T5 light fixture from lightyourreptiles.com comes with three timers built in so you can independently control two bulbs at a time and a set of blue LEDs. By placing a standard appliance timer on the heat lamp I have a very nice control of the system. For the purposes of this discussion let’s assume that sunrise is at 6AM and sunset is at 8PM. Adjust the times as is appropriate for your latitude and season.

**Night:**

Midnight to 30 minutes before lights come on: Ultra-sonic humidifier creates a moving cloud

2:00 AM Misting system goes off for two minutes. This helps with the simulation with nighttime humidity spikes.

**Morning:**

5:30 AM (30 minutes before sunrise) Misting system goes off for two minutes. This creates a layer of dew waiting for the chameleons when they wake up.

6:00 AM (sunrise) Switch on the heat lamp. This is a relatively low light wake-up call

6:10 AM Switch on T5 bulbs from the main light fixture

8:00 AM Switch Off heat lamp if ambient temperatures will reach 80F or greater during the day

Start the dripper. I drip on a different plant each day making sure some of the dripping hits the soil.

**Afternoon: (Note: an afternoon “rain shower” is optional depending on your species and season)**

1:00PM Heat lamp is turned off

2:00 PM Misting system goes off for two to four minutes

3:00 PM Heat lamp can return back on if necessary

**Evening:**

The goal here is to provide a gradual “sunset” as opposed to a sudden plunge into darkness.

6:00 PM Switch on blue LEDs. (This is optional)

6:00 PM Switch off bank of T5 bulbs

6:30 PM Switch off heat lamp if still on

7:00 PM Switch off blue LEDs

# Section 3: Drainage

The Medium Atrium Enclosure comes with a fitted drainage tray which will allow waste water to collect under the cage. This keeps the waste water outside the cage and out of reach of the chameleon. By storing water outside the cage we avoid making an unappetizing soup of water, poop, and escaped feeders which, if he eats the feeder, could give your chameleon a dangerous cocktail of bacteria.

**Floor Type**

Either the white PVC floor or the screen panel may be used as the floor. Both sit on top the bottom frame. Note that the white PVC floor is not water tight and water will find its way to seep over the sides. I recommend drilling holes in the white PVC floor in strategic spots to aid in drainage. These holes must be small enough that the feeders you use cannot get through. I use a 1/8" drill bit. The white PVC floor is usually used if the cage design has a potted plant sitting on the floor and the extra support of a solid floor is needed. In this case, I make sure I have these drainage holes around and under the pot. The pot sitting on the floor will cause an indentation which will encourage water flow to under the plant. Escaped feeders will gather there as well. Therefore, a quick drain of the water before it gets under the pot, and definitely once it gets under the pot, is important for overall cage hygiene.

Included with the cage system is a Drip Easy screen floor panel that can be used in place of the white PVC floor. This approach was introduced by Ed Kammer of Kammerflage Kreations as a way to have the ultimate drainage. There will be no standing water! You give up floor strength, but with the included Dragon Ledges you are encouraged to move all your planting to the side of the cage and off the floor. The Drip Easy floor is perfect for naturalistic cages as, against the black of the drainage tray, the floor visually disappears. Your eye will be naturally drawn to the plants and chameleon.

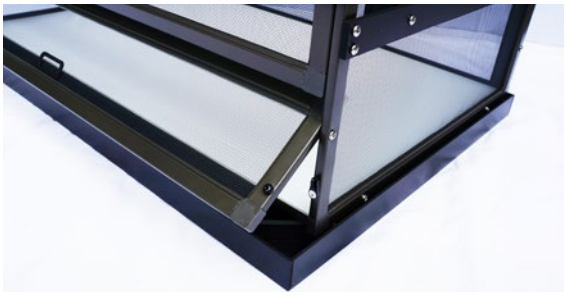
**Emptying the Drainage Tray**

There are a number of ways to empty the drainage tray. You do not need to lift the cage to do this as there is a space left in the front that allows access to the water in the tray. You do not want to move the tray when it has water in it because there is no way you can expect to move the tray without getting water sloshed all over. The following are the main methods for emptying the drainage tray of water:

**Method 1: Evaporation.** The first and easiest method is through evaporation. This will happen naturally and if there is a balance between ambient humidity and the amount of water coming into the cage this may be all that is needed.

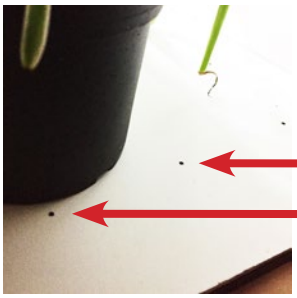
**Method 2: Wet/Dry Vacuum.** The drainage trays are designed such that there is a space in front to allow a crevice tool for a wet/dry vacuum to suck up the water. Home Depot offers an inexpensive wet/dry vacuum called the "Bucket Head". It fits on top of a standard bucket and is compatible with crevice tool nozzles that allow fitting into tight spaces. The set-up runs about $30 at Home Depot.

**Method 3: Install a Gravity Drain.** A gravity drain allows water to drain out when it reaches a certain level into a bucket below the height of the cage. The next page will illustrate a step-by-step guide to installing a gravity drain



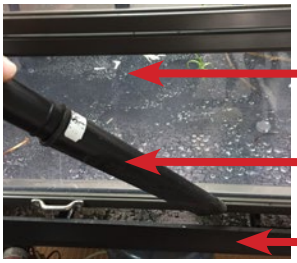
Using the white PVC plastic floor panel

Using the Drip Easy Screen floor panel




Holes drilled in the white PVC floor panel


Bucket Head and accessories




Using the crevice tool

# Section 3: Installing a Gravity Drain (Optional)

**Method 3: Install a Gravity Drain.** It is quite easy to install a gravity drain that will allow water to flow into a bucket under your cage. A drain with the common drip system 1/4" tubing (the same tubing used with most misting systems) will be good for draining water only. If you end up with feeders and such in the drain tray then the 1/2" drip system tubing would be more appropriate. Both tubing and the fittings can be found at home improvement stores where they stock their drip systems

With any fitting, whether straight coupler, 90 degree elbow, or even miniature flow control valve, make sure that there is a flange that is wider than the barbed end. This ensures that there is something to glue in place!

With a drill, Super Glue, a 1/4" (or 1/2") elbow, and some length of tubing you can retrofit a drainage tray. I drill a hole in the side wall of the drainage tray as close to the bottom as possible. Watch out for lips. Sometimes the bottom edge of the side is not the bottom of the tray! Drill a hole with a bit just barely big enough to fit the barb through, but not big enough to fit the flange through. I'll not give drill bit sizes here because they will all be different depending on what size and brand drip fitting you get.

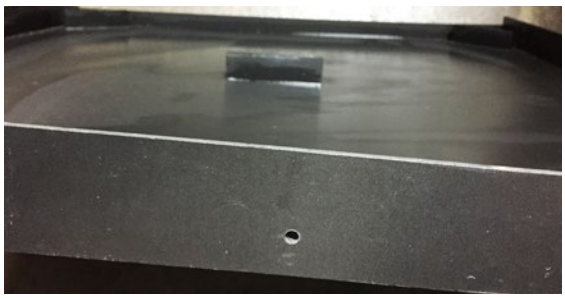
Before you drill your hole, study the area and mark with a pencil where you want to drill. You want to make the hole as close to the floor as possible, but definitely above the floor! If the hole is just small enough that you struggle to push it in that is a good thing. Once it is pushed in you will line the flange and surrounding area with Super Glue and put the two pieces together. I use the gel version which does not run. It allows me to make sure the coverage is solid before hardening. The key to making a water proof seal is to make sure there is ample glue all around the opening to seal it off.

Once the joint has hardened, test the water tight nature by dumping in a couple gallons of water. Block the drain and see if the glued area leaks. If the seal is good then just attach a length of tubing to the output and lead it to a bucket.

Whether you are using 1/4" or 1/2" tubing heat the tubing up before attempting to push it on. To do this, microwave a cup of water until it is very hot. The actual temperature isn't important. I put a cup of water in for two minutes. Soak the end inch of the tubing in the hot water for 30 seconds to soften it up. Once it is soft, the tubing will go over the barb and will cool in place creating a nice, water tight connection.

An option that makes sense if you installed this fitting in the back is to attach a length of tubing on the inside that takes water from the front of the drainage tray. This allows you easy access to the intake in case it needs unclogging.

I also like to wrap the intake with a small piece of cloth to keep any stray chunks of matter from getting into the tube and clogging it.



Creating the drill hole. Note that the hole placement was measured ahead of time to ensure it cleared the floor.


The gel version is so much easier to use in this case!

Installing an elbow

There are a variety of fittings that can be used including straight couplers and even on/off valves if you would like to be able to control the flow. Of course, you are free to place the drain hole anywhere that best suits your design.

There are also other grommet and fittings that could work well for the purpose of including a drain system. 1/4" (or 1/2") drip system components and the Super Glue Gel presented here are represented at just about any home improvement store and are the easiest of the many solutions.

# Section 4: Dragon Ledges Connections

## Introduction

The patented Dragon Ledges were invented to solve the problem we chameleon keepers have in mounting horizontal branches and potted plants in cages with screen panels. They work by providing a solid anchor that distributes the load to the aluminum frame.

Dragon Ledges are included loose so that you may place them wherever is appropriate for your specific design. There are four 1/2" diameter holes along the Dragon Ledge that are useful for attaching branches to or anchoring various components. But, as you will see in this application note, by using the Dragon Ledges to anchor a strong support grid you give yourself the ability to mount horizontal or diagonal perching branches at any level.

Dragon Ledges excel at creating support grids

## Attaching Branches to the Dragon Ledges

Branches and plants are commonly attached to the Dragon Ledges via zip ties or with a hot glue gun. Zip ties are found in the electronics department of your home improvement store. They are durable in our caging environment and come in black which is easier to fade into the background. If there is a particularly thick object to anchor, two zip ties may be daisy chained to make one almost twice as long. The unused "tail" is clipped off. In my applications I hide the zip ties with either Great Stuff foam or else by draping an artificial vine over it.

If you live with a crafty family member you may already have a hot glue gun available to you. Hot glue is a convenient way to discretely lock branches in place either on the Dragon Ledges or branch-to-branch. If your design looks better with a branch twisted a certain way and your zip tie connection can't keep your branch from swiveling, a dollop of hot glue does the job to hold the branch in a certain position. But there is a big warning with hot glue. When you use it you will notice that you get a string of hot glue connecting the gun and the gluing point following each application. Be obsessive in cleaning these excess strings after each application. If your chameleon runs across one and gets tangled in it you may run into health issues.

Zip ties provide a visually subtle anchoring

Hot glue can anchor a branch in place

With Dragon Ledges, zip ties, and hot glue, perching branches may be anchored and pots mounted.

Hot glue can also connect branches. A zip tie can be added to this joint to provide additional strength.

# Section 5: Branching

## The Support Skeleton of Your Cage

The most effective way to use Dragon Ledges is to attach two vertical supports in the form of thick branches. With this arrangement you are able to firmly anchor horizontal branches and supports at any level. In this design I want there to be a main foliage potted plant on the right side so I am spacing the vertical supports apart the width of the pot I will be using for the plant. This will give me two of the three anchor points necessary for my pot.

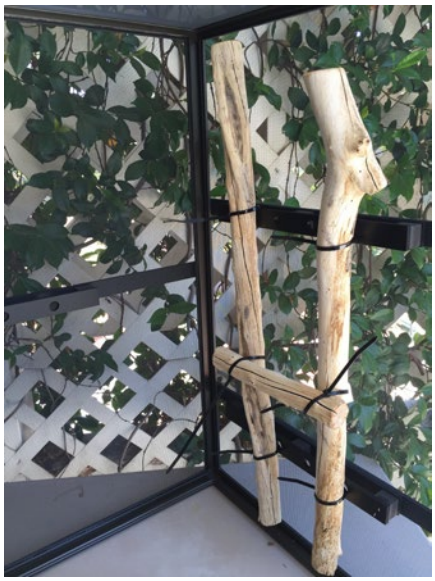
I select branch lengths that are within a couple inches of the top and bottom of the cage. This allows me freedom to mount branches at any level and keeps the cage floor clear for ease of standard maintenance. I like to have the bottom of the branch close enough to the bottom that my chameleon can reach it if it finds itself on the floor, but not within reach of any feeder insect that has escaped.

In your design these vertical supports can be at any angle depending on the look you desire. Remember that nature is rarely at 90 degree angles.

## Preparing for the Main Foliage Plant

Cross beams are useful for mounting potted plants. I used a short piece that was left over from cutting one of my vertical supports down to size. You'll notice in the last image how the pot snuggles into the branch structure and rests on this crossbeam. Zip Ties are sufficient to hold a crossbeam in place.

If you need more support and a crossbeam is not possible (say you need to mount a pot somewhere other than between the vertical supports) another dimension of support could also be in the form of a branch anchored to the back Dragon Ledge, running by the side of the pot, and anchored to one of the vertical supports



## Adding in the Main Perches

Our branches are our chameleon's roads and give him access to what we have set up in the cage. Since I plan on using smaller artificial vines I only am creating the base structure. The advantage to using the artificial vines is that I can easily move their location as both my chameleon and the plants grow. We fully intend to have a healthy chameleon and a healthy, living environment so growth and change must be accommodated. The biggest wild card is the main foliage plant and creating the leafy hiding spot that doubles as a humidity pocket. We can plan for its general location, but we will not know the exact best placement of the perching vine until the plant is in.

If you are going to use the double potting method described in this procedure you will have to keep in mind the space you will need to get a pot in the cage and into the mounted pot. Do not branch over the pot opening until the plant is in place!

# Section 6: Potting

## Types of Pots

My favorite pot type to use is the 1 gallon black plastic pot offered for a dollar or two at your standard home improvement store. They are light and perfect to hold the size plant we want in our cage. Any container can be used, of course, but we want to give careful consideration to how it looks. The look I am creating here is as natural as possible so I want my pots to fade into the background.

For accent plants, you will want smaller pots so you have more freedom of placement. These actually usually end up being more expensive than the 1 gallon pots! But you are creating a work of art here that you will look at and tend for years. Do it right. You do have another option if you plan on covering an area with Great Stuff foam. For that application I either carve a pot out of the foam or else I use cups bought at the local $.99 Store. There I can find a wide range of shapes that I can use to fit the plant or space. If you are selecting different shape potting containers, give consideration to how your plant will grow. When I plant bamboo or *Schefflera arbicola* (umbrella plant) to grow up the wall I give it a deep container to give those roots better hold to support height.

## Attaching the Pots

Every pot will need support in three dimensions to be stable. The most basic way of accomplishing this is to have branches on three different sides that the pot is zip tied to. I make "pockets" for my pots bounded by branches. I drill holes in the plastic pot so I can weave zip ties through and attach the pot to the branches. Drops of hot glue can also be used if more stability is needed.

Each pot will need drainage. When I am preparing a pot I can create drainage holes by drilling them if necessary. You'll want a drainage layer that keeps the soil from clogging the drain holes or from flowing out. For this I use a layer of LECA clay balls or just hot glue in small pieces of shade cloth over the holes.

My favorite pot strategy is to get two identical plastic pots for each of the larger plants. I use one pot to drill holes and I attach it firmly with zip ties to the branch structure. This is to provide a solid base. I plant my plant in The other pot. This allows me to drop the planted pot in at the last stage. This also allows me to easily replace the plant if the plant dies or I decide I would like to switch it out.

When placing any of these pots consider that a level top makes watering the easiest as there won't be run off. The pot image showed on this page is at a dramatic angle which had a great affect when a large pothos was placed in it, but water will easily run off the surface. Thus I had to water this plant with a drip system that fed water to the pot in small enough amounts that it would soak in before running off the edge and being lost.

## Branching and Pots

If you use the double pot method then you will need space to bring the potted plant in and slide it into the holding pot. Keep this in mind when you are placing pots. Putting one too close to the top panel will require you to remove the top panel to slide in the pot. If you want to have climbing branches in the airspace above the pot then put the pot in and attach the branches in a non permanent manner so you can remove them in case you want to replace them.

# Section 7: Working with Great Stuff (Optional)


## What is Great Stuff?

"Great Stuff" is a certain brand of expanding foam. This foam was designed to be used in home repairs to seal cracks. Reptile keepers have discovered that it works great to create vivarium landscapes. When using Dragon Ledges, we chameleon keepers can get the same benefit!

There are many varieties of Great Stuff. I use the Pond & Stone variety pictured here. It is designed to repair fish ponds and so is the color black, is designed to work in wet areas, and is non-toxic. Other Great Stuff varieties come out an unnatural cream color and require an extra step of silicone and substrate to look natural.

Great Stuff is propelled out with a highly flammable gas and must be used in an area with high ventilation (outdoors) and away from any source of flame. It is a very sticky substance and once it gets on your skin or your clothes it is very difficult to remove. Wear old paint splattered clothes if you have them. It is uncanny how this stuff makes it way places it shouldn't no matter how careful you are! But once applied and dry, it is safe.

## How to use Great Stuff in a Cage

Great Stuff shoots out like shaving cream and then slowly expands until it hardens. I suggest buying a can of the cheaper standard cream colored variety just to experiment and get a feel for how much it expands and how fast.

Each Great Stuff can comes with a dispensing straw. Unless you are quick and talented in cleaning out the straw after use, it will be a one time use. This means that it pays to plan out what you are wanting to do ahead of time. Foam the areas that you know will take the whole can first and leave the accent touch ups for last. The challenge we chameleon keepers have is that we are designing in 3D space up in mid-air. Most projects I do require a multi step process of  doing one side, allowing it to dry, and then turning the cage over to do another side.

When you spray the foam out it will stick, but can fall if there is too much weight to the foam mass. You will have to be a quick and dynamic sculptor. The foam will expand and start hardening as soon as it is out of the can. The area exposed to the air will harden first. If you make a big enough mound of foam the outside will harden while the inside continues to expand. In this case you will have the inside burst through the outer shell for an unexpected result. In some cases have had incredible contours I could never have purposely designed in and in other cases I have had a mess. It is always an adventure!

When applying the foam you may squirt it directly on the surface of the cage wall or, in the case of a screen wall, putting the end of the nozzle directly on the outside surface. Squirting through the screen is a great way to fill in hard-to-reach gaps.

You can use Great Stuff to

1) Hide connection hardware (like zip ties)
2) Make a junction of branches, pots, and Dragon Ledges one strong, solid piece
3) Make small rock cropping-like accents
4) Make small pots. (Since Great Stuff hardens so well you can actually carve out a hole in a fully cured mound, drill a drainage hole, fill it with soil, and plant an accent plant.)

During expansion, the foam will sometimes squeeze through the screen panels and create a small mound outside the cage. This is harmless and you can leave it if you like or cut it off with a knife. With the clear PVC the expansion may create a bulge. The Clearside will mold to it and, although it is an unexpected, bizarre shape, is not a cause for worry. The clear PVC is quite strong and will not burst easily.

Drainage for your pots, whether plastic or carved, is important. You can leave the bottom of the pots hidden from view, free of foam, or you can use a standard drill to create a hole in the dry foam. You can also stretch a length of 1/4" drip system tubing through the area you want drainage and foam over it. Leave a generous length above and below so the foam does not expand over your ends. When the foam is dry you cut the tubing down to size and you have created a drainage pipe. If you are digging a planting hole in the dried foam then simply dig around the length of tubing coming out the top.

Foam that seeps through the screen is harmless and can be left as is or scraped off.

Foam does a great job of hiding connections and solidifying the entire joint.

# Section 8: Great Stuff Application (Optional)


## Application

Keep the shipping box pieces as a great work surface. When applying foam remember to make it a point to foam all around and under/over the Dragon Ledges so you make one solid piece of the Dragon Ledges, branches, and pots.

1) You do not have to cover every surface, just the ones that can be seen from the front. Use black pots!

2) Leave the bottoms free of foam for drainage.

3) Beware of creating "caves" that will provide homes for spiders and hiding places for escaped feeders

4) Pictured is about one can of Great Stuff

## Completing the Application

It is safest to do one side and then wait a day for it to dry and do the next side. If you turn the cage too soon and a clump of foam falls it is miserable trying to recover the look. Great Stuff is not easily cleaned up. If you do get some smeared somewhere unintentionally you can spray a little more and create a visual accent for aesthetic purposes only and hide the smear.

Once branches are firmly anchored by zip ties and foam let the foam expand around the branches randomly. Note how the branch on the back seems to come in and out of the foam background. The beauty of nature is that it is not predictable or "clean". It is also not excessive. Avoid the urge to put more in just because you have more foam left. The foam background should functionally anchor your cage elements and provide some visual interest. It should take as little of the internal space as possible.

Remember you will get expansion. Use only the minimum necessary coverage!


## Final Thoughts

This build took three cans of Great Stuff Pond & Stone foam. Most of what is seen here will be either hidden behind plants or fade to the background. My purpose for the foam is not to be a visual element itself, but to hide the artificial looking pots and mounting hardware.

In this build I used the foam to go over and hide the tops of the pots of the accent plants. I will plant the greenery directly in the pot. For the main foliage pot I have left the top clear so I can place an already potted plant inside and then, if need be, I can easily remove and replace the potted plant.

Foam is also effective for tricky areas where you were not able to get three anchor points on your pot. The pot in the lower left back area ended up with only two zip ties. The foam was used to immobilize the pot further. Note in this case I blocked the drainage with the foam and had to go in later and drill a hole through the dried foam.

# Section 9: Adding Plants

## Adding the Main Foliage Plant

I usually add the main foliage plant first. This is simply because its spread will let me know if there is any adjustment needed to accommodate it by moving other items. Hopefully I did a good job of visualizing and planning so there are no surprises!

If you have done the double-pot method then adding in the main foliage plant is simply navigating through the branch structure and dropping the potted plant in the anchored pot. This is the reason for that warning before of making sure you have a path to bring the main foliage plant in. You can add in branches later once the plant is placed if you desire.

If you are planting directly into the pot then this is the part where you enjoy shoveling small amounts of drainage rocks and soil in like building a ship in a bottle.

## Planting Plants

Most of my accent pots are meant for planting directly in the pot. I have put a small layer of gravel at the bottom of the pot or planting hole to keep the soil in and then put the soil and plant in. The top of the soil may be kept bare or have large pebbles placed on top if you worry about soil ingestion.

I plant the taller plants in back. The *Schefflera* is more of a round shape and the *Pachira* bushes out above it's trunk. This makes a perfect layered effect. My color accent is in the middle with the large foliage plant taking up the right side of the cage.

Each of these plants will need the proper bright lighting and water. The high output T5 lighting I suggest in the parts list will do well in this cage size. In my design here it is the watering that will be tricky. You must ensure that each plant is getting enough water. And remember, just because there are water droplets on the leaves does not mean the soil is getting moist.

## Pots Carved from Foam

In my design I have baby spider plants peaking out. These provide both shape and color interest. I created holes in the foam mound, filled them with sphagnum moss, and placed a "spiderling" in the hole. Ideally, we would have a drainage hole. You can add small plants like spiderlings, mosses, or other accent plants in this manner. The key is going to be making sure they get sufficient water. If the conditions are right they will thrive and their roots will grow into the foam. The example below shows a different build I did to create a carnivorous plant "shelf" using this method.

A sufficient mound of foam is created and left to fully dry. Ensure proper structural support. Dragon Ledges are ideal for this.

Planting holes may easily be dug out by knife and fingers. Drill a drainage hole before adding soil.

Add drainage layer, soil, and plants. Plant roots will grow into the foam.

# Section 10: Final Touches

## Vines

Once the main perching branch "skeleton" is complete and the plants are in their place, I fill in the spaces with smaller climbing highways. You can use smaller sticks or, like I have done here, artificial flexible vines. As seen in the first image, I used thin vines wrapped around the interior of the cage to give the chameleon access to most of the cage space if he desires. I then used a large flexible vine to make sure he had a substantial perching area that was hidden behind the plant. A flexible vine is ideal for this as you can adjust placement after the plant is in and you can readjust afterwards as the plant, and your chameleon, grows and the ideal hiding space shifts.

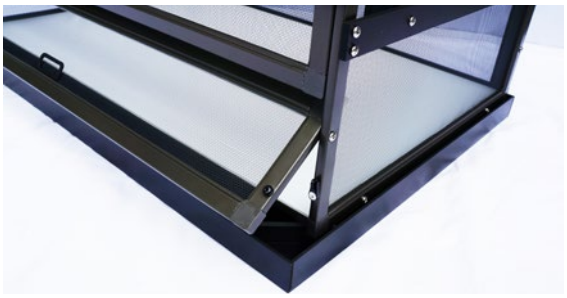
## Floor Panel Selection

The Medium Atrium Enclosure comes with two floor choices. You have both a white PVC floor and a screen floor.

The white PVC floor is used when your design has a potted plant on the floor. This solid floor helps give some support. As mentioned before, If you elect to use the white PVC floor I suggest drilling small (1/8") holes in the floor to aid in drainage. This is not mandatory as water will flow to the sides and seep into the drainage tray. But it goes a long way towards preventing water, poop, and feeders from finding a great place to hide under a pot. At least the water drains out quickly and does not have a chance to spread the poop bacteria. The white floor can be kept stain free by using the Mr. Clean Magic Eraser commonly found in grocery stores.

I use the screen floor in this application because I am looking for the floor to visually disappear. The screen allows the black of the drainage tray through and our eyes are drawn not the to bright white floor, but the colors in the foliage and chameleon. The drainage is obviously excellent with this option!

The floor panel slides into the cage via the service door. The floor panels are held in place by gravity and do not need to be screwed down.



Using the white PVC plastic floor panel

Using the Drip Easy Screen floor panel

## Final Thoughts

I am also including a nicely made feeder cup in the parts list. Although it is quote easy to make a very cheap feeder cup. I suggest spending the money to get a feeder cup that looks professional and matches the amount of effort you have put into this cage. I particularly like the 4" feeder cup from Nick Barta at www.FullThrottleFeeders.com.

And now comes the part where we sit back, enjoy a beautiful scene, and watch our chameleon. Really watch your chameleon! Each chameleon has their own personality and by watching your chameleon's behavior you will be able to customize the cage for his personality. Cage designs that have worked effectively for years will suddenly meet one chameleon that just doesn't like it. So what do you do? You adjust the cage until it is right for your special friend!

Thank you for joining me on this journey. There is no better way to house our chameleons than to create an environment as beautiful and as alive as they are!

# A Fond Good Bye...

So now you have an awesome chameleon in an awesome cage! Where do you go from here? Easy - start thinking about your next cage! What could you have done better? Should your plant choice be different? Did you really want to put a Venus Fly Trap in, but were not sure how to make it work? How is that drainage working? Well, now that you have your first cage under your belt it is time to pick up bits of information and write down creative thoughts that will help you make a better design next time. It is okay if it is 3 years down the line! It also is okay to get an extra cage and create a terrarium that you slowly put together. Maybe sometime in the future, when it is perfect, you'll introduce your chameleon.

What other decorations might make for a great cage? The tiki cage in this image was not made for a chameleon. It was made because I just had to make a tiki cage! A chameleon eventually made its way to live here, but we are allowed to build up cages simply for the passion of it. My next build will be a 45" wide bio active cage in a Large Atrium Clearside Enclosure. And, no, I do not know which chameleon will be in it - or even if one will be. Once you get your creativity growing it will be exciting to see where it takes you!

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Of course, the final question on everyone's mind is - who is that gorgeous boy? This Ambilobe panther chameleon is **Manga-hay** (AKA Blue Heat) and is part of the breeding team at Kammerflage Kreations. And a big thank you to Ed, Liddy, and Briana for letting me share this gorgeous cage and inhabitant! You can learn more about their work at http://www.chameleonsonly.com