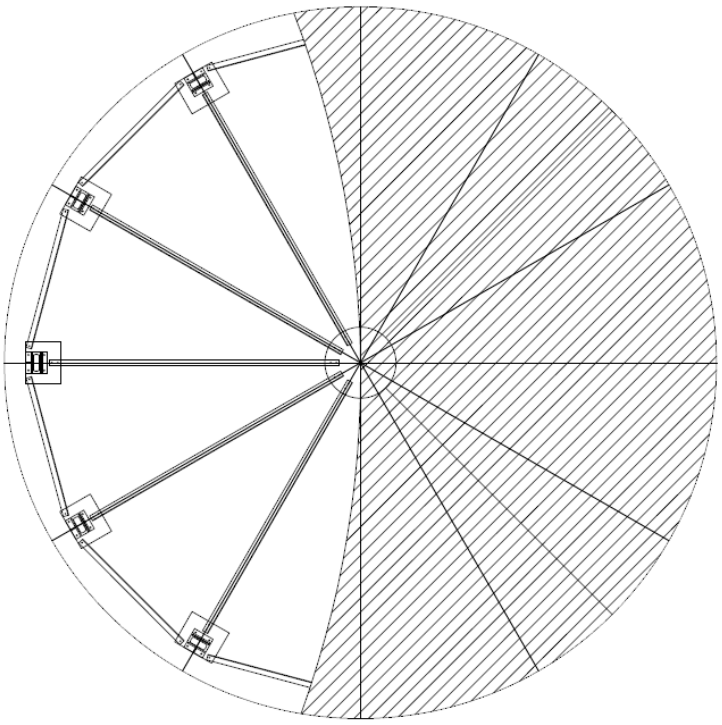
Revolving Heavy Duty Platform
Assembly Instructions

Models Available
RV3MHD
RV4MHD
RV5MHD
RV6MHD
RV7MHD
RV8MHD
RV9MHD



Smartstage Ltd. (USA) | +1.702-880-0011 | smartstage.com

BECAUSE SMARTSTAGE MAINTAINS AN ONGOING PROGRAM OF PRODUCT DEVELOPMENT AND IMPROVEMENT, WE RESERVE THE RIGHT TO MAKE IMPROVEMENTS IN DESIGN OR CHANGES IN SPECIFICATIONS WITHOUT INCURRING ANY OBLIGATIONS TO INSTALL THEM ON UNITS PREVIOUSLY SOLD

General Safety Rules & Tools

WARNING!
READ AND UNDERSTAND ALL INSTRUCTIONS.
Failure to follow all instructions listed below may result in serious personal injury.

SAVE THESE INSTRUCTIONS

- Stay clear of all pinch points during unpacking and assembly.
- Make sure all fasteners are properly engaged before use.
- Make sure all tops are positioned properly onto the support system.
- Refer to these instructions as required and use them to instruct others who may use the Heavy-Duty Revolving Platform.
- Read these assembly instructions carefully. Failure to read the assembly instruction is considered a misuse of this equipment.
- Become familiar with all caution and warning decals affixed to the turntable before use.
- Never cover or deface caution/warning labels.

TOOLS REQUIRED

1. Metric socket set, numerous sizes
2. Leverage bar about 2' long
3. Open end wrenches, or adjustable wrench
4. Level
5. Adjustable Square

Thank you for your purchase of your new Smartstage turntable.

Assembled correctly, your turntable will run quietly and smoothly for years to come, please pay attention to the assembly instructions.

When you open your new turntable crate, remove the components, and organize them on the floor in 'like' groups, to ensure all is complete.

The assembly is done is four main phases;

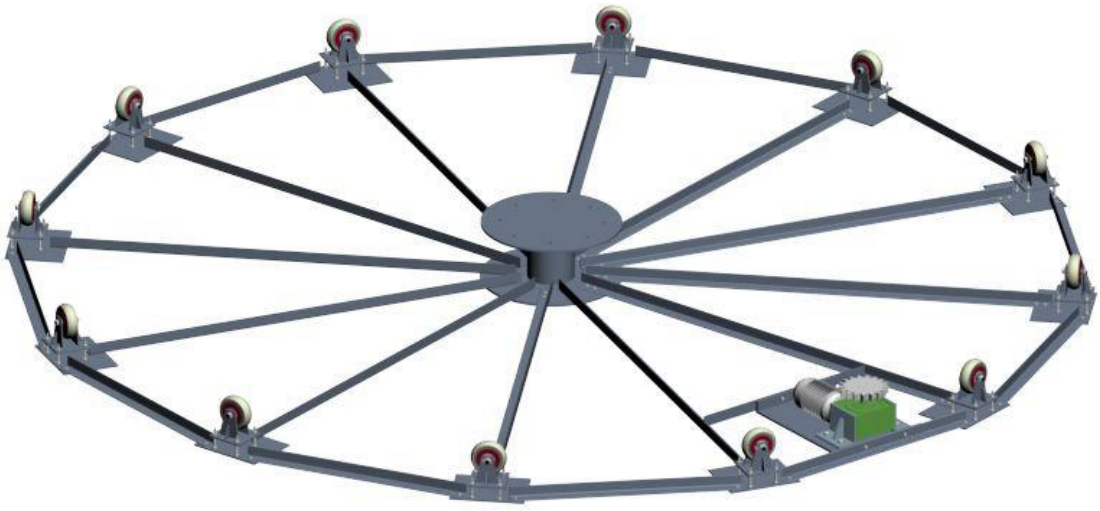
1. Laying the BASE on the floor, with the motor drive, hub (center) and the support float wheels, all interconnected with the angle bracing.
2. Laying the FLOAT ring on top of the casters, which contains the "pingear".
3. Laying the pizza-like triangular shape DECK sections, between the float ring, and the hub.
4. Placing the final MDF top on that, the finish top.

PHASE 1 - The first phase, is to position all the wheels, the hub, the motor, and the angled braces as seen in Drawing 1. Assemble them with the provided bolts and washers, but DO NOT TIGHTEN THEM YET!

Tip: be sure the braces come out perpendicular (straight, not twisted like a pinwheel) from the center.

At this time, you may also place the motor drive in position, it matches ONE of the outside braces, there are holes in the brace looking to match up with the holes on the motor base. You can lay the motor cable outward into the direction where you wish to place the control box. You can also set up your control box position. We will come to the wiring and control system later. We suggest do not BOLT the drive in, until the levelling has been done, as explained below.

Drawing 1

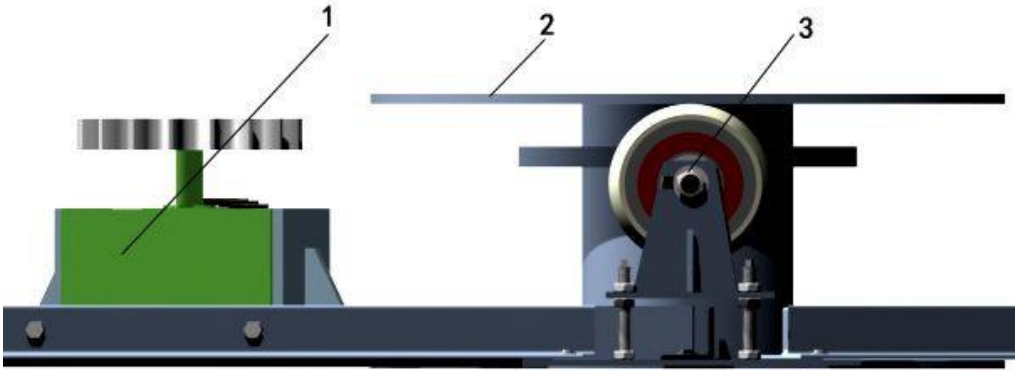


Installation hub, supporting wheels, motor reducer

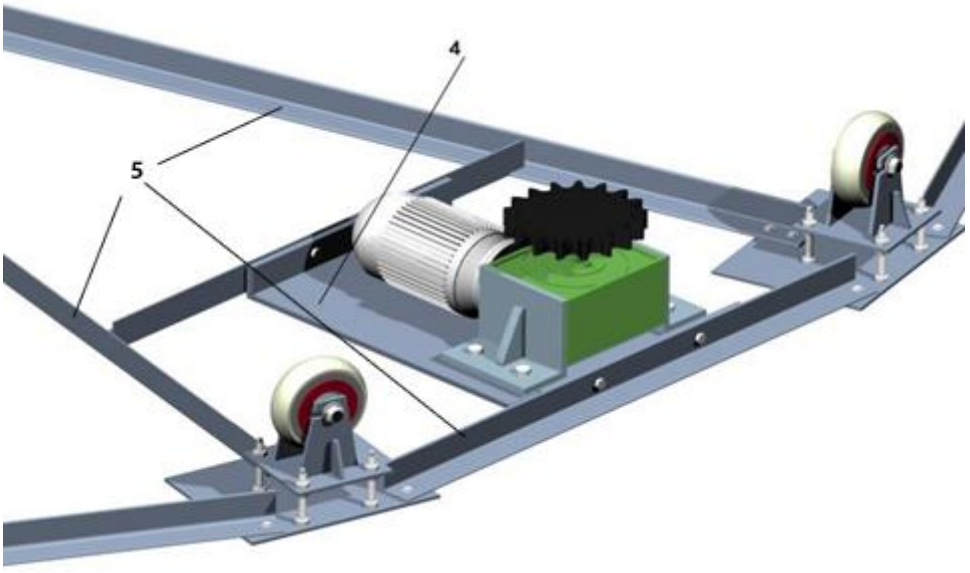
See Drawing 2&3.

(1) motor reducer gearbox
(2) center base top plate
(3) supporting wheels with adjusters
(4) motor base
(5) angle bracing

Drawing 2



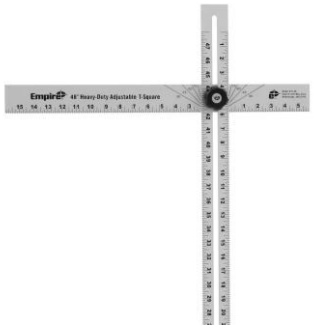
Drawing 3



Levelling;

This step is very important. If you continue to assemble, and not have levelled the bottom (casters) and mid (float ring), you may have to dissemble again.

After you have assembled all the casters on the floor, using an adjustable square, place it on the floor, and ensure each caster is matched in height from the floor. If the floor is not level, it presents a problem, but can be resolved with the adjusting levelers. Go to each caster, make sure they match. Any of these types of measure devices are acceptable;



The next phase explains the float ring assembly. After the wheels are equal in height, place the float ring on top, and SLOWLY rotate it around. Be careful, as it has not yet been secured to the center hub, and if it drifts off center, it can drop off the wheels.

While you slowly spin the float ring on the level casters, using the same measuring tools, make sure the float ring also remains level. If it is, or is out by 1/8" or less, you can move to the placement of the top layer. Lasers and long levels, while seeming wise, are actually not that helpful. If you have a good laser, and know how to use it, then yes, go for it.

PHASE 2;

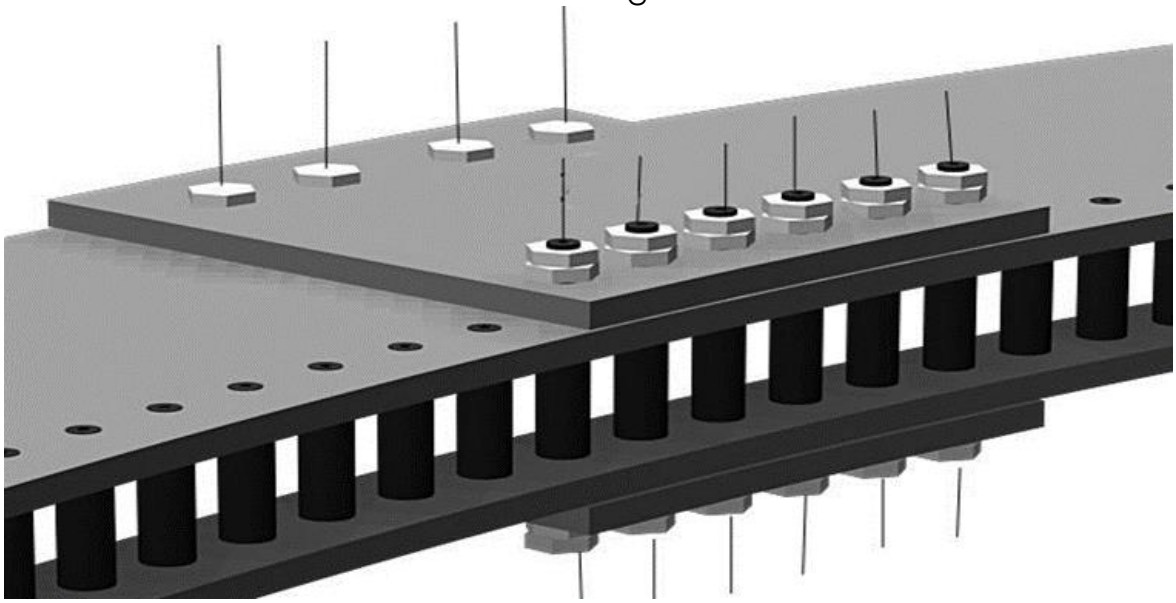
Float Ring assembly (Drawing 4)**;**
The float rings are the heavy arcs with the pins between them. The quantity of them can vary, depending on the size of turntable you are constructing, but they will be numbered, 1, 2, 3, 4 and so on.

Place them in the correct order on the floor around the already assembled base. It is easier to start on the floor, as opposed to attempting assembly on top of the wheels.

Using the plates and bolt/nut package provided, you can go ahead and assemble 3 or 4 of the float ring section, but again, only hand tighten, do not do final tightening yet. Use the bolt (M10 × 30), spring washer and nut (M14×1.5) to connect them together.
Do this until all the float rings are set up on the casters and bolted together. After it is assembled to form a circle, ensure it is roughly centered to the hub.

The pie frames to be added next, will automatically align the float ring.

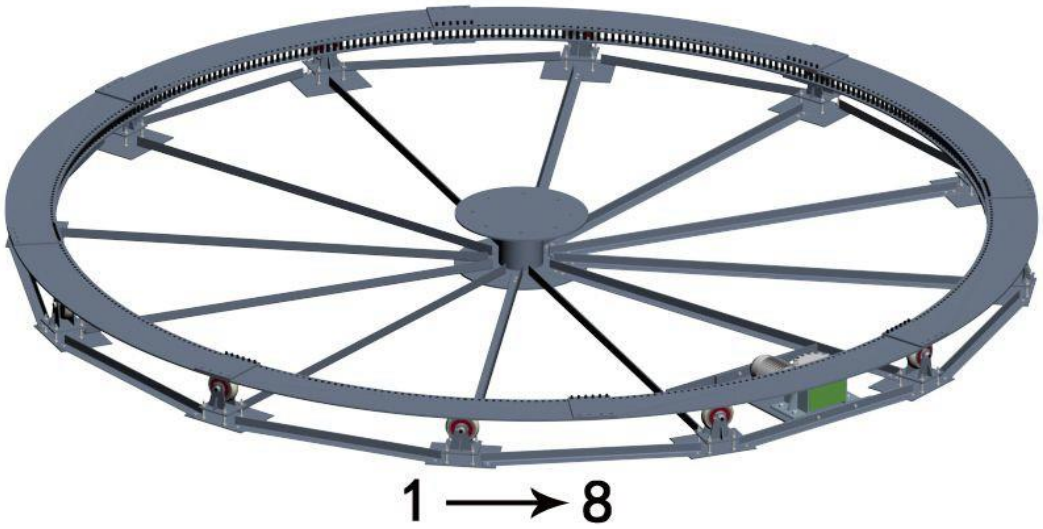
Drawing 4



Place in numeric order (please see drawing 5). The number of the float ring is printed on the float ring sections. The following drawing is the referenced diagram using an 8 piece float ring as an example.

Finally, before phase 3, using a tape measure, check the distance from side to side, ensure you have a circle, not oblong, <u>but still do not tighten.</u>

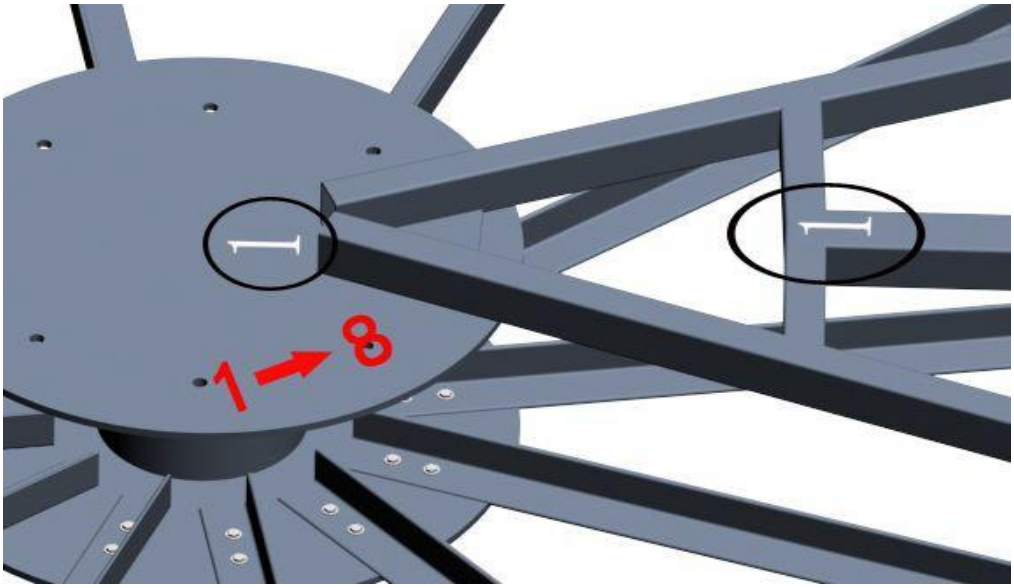
Drawing 5



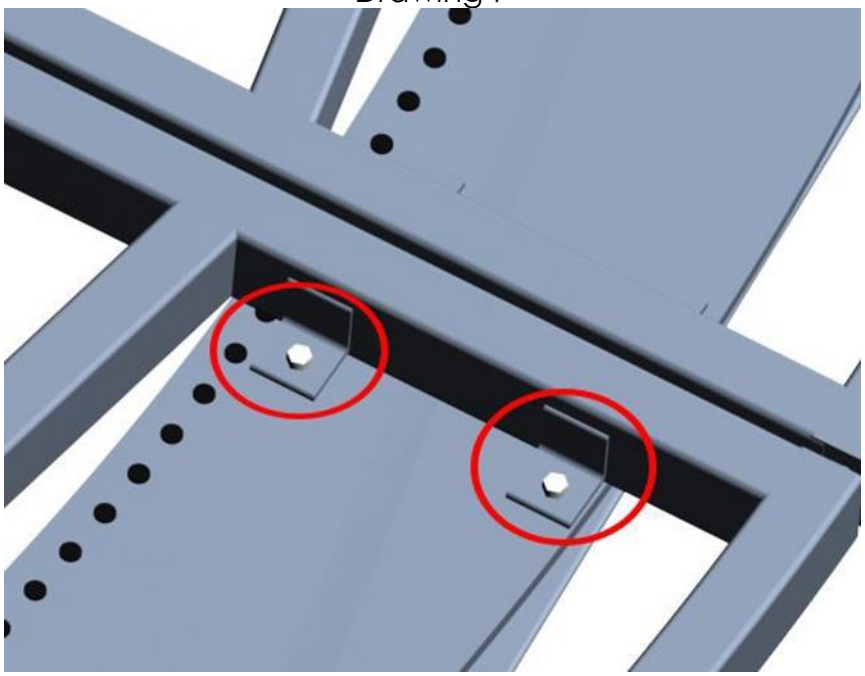
PHASE 3 - Installing the Triangular Deck Sections

All the deck sections are numbered and can be placed directly centered and on top of the relative float ring section (see drawing 6), yes, the numbers can match. Lay all the deck sections in order, and thread the bolts through the decks into the float ring. (see drawing 7)

Drawing 6

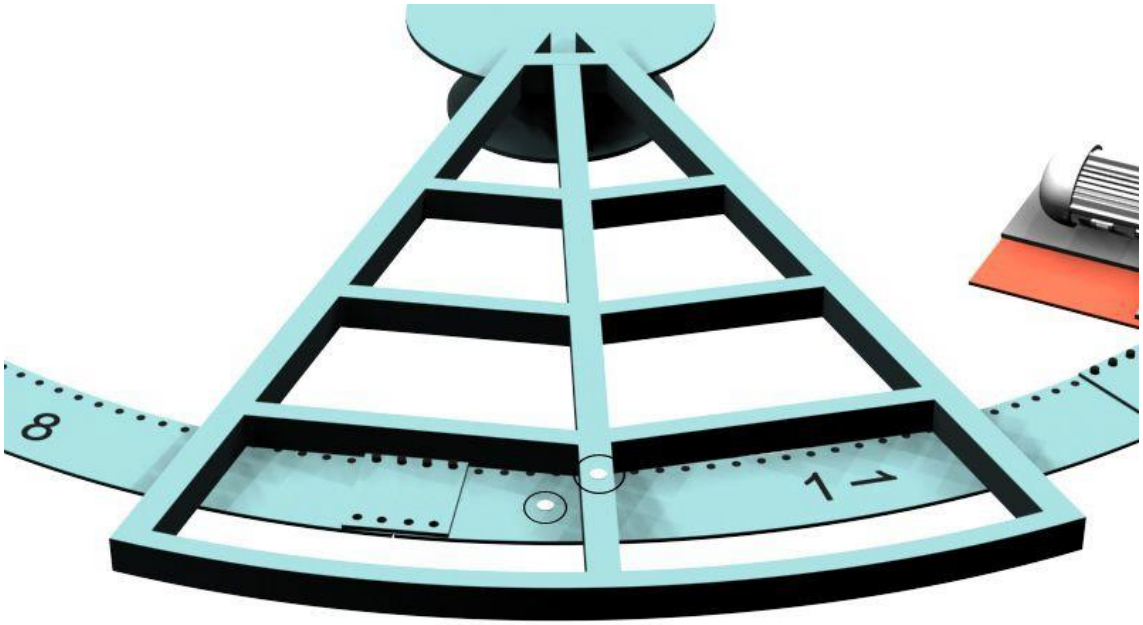


Drawing 7



It is most likely the holes will not line up by themselves (see Drawing 8), it is easy to use a leverage bar, and just muscle the deck sections to the float ring, thread in the bolts, but do not tighten.

Drawing 8



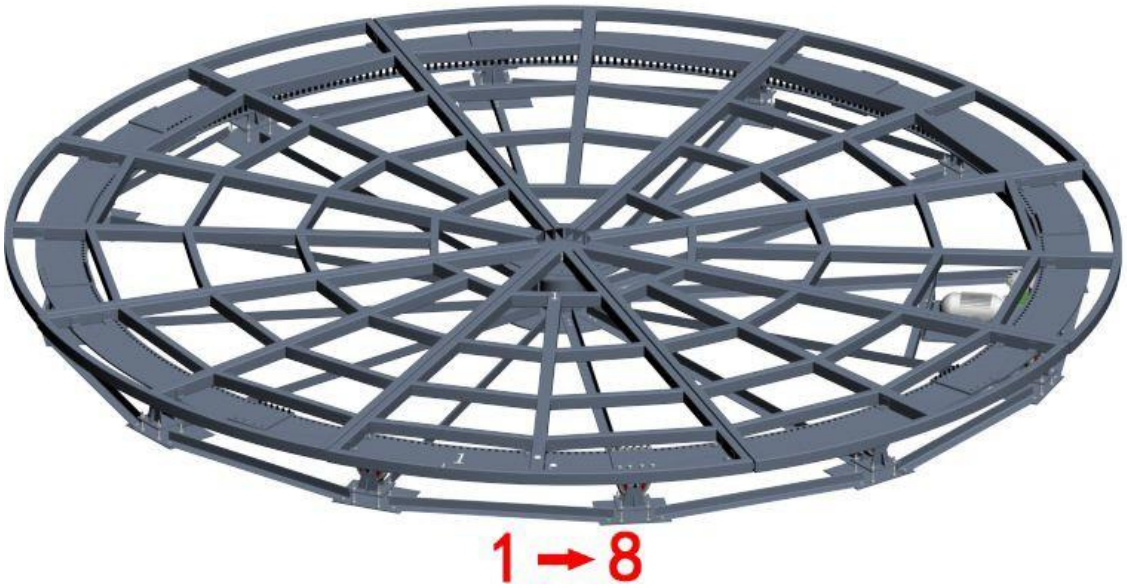
After all the deck sections are in place (see Drawing 9), get your tape measure again, and ensure you have a clean circle, not elongated. Measure both the pie decks, AND the float ring for roundness.

TIP: If you ensure it is round now, you will ensure a smooth operation later.

Once you are sure you have all the steel bolted in the correct positions, you can now go ahead and tighten everything with a wrench, DO NOT overtighten.

As you tighten, be sure the deck sections do not un-level, or pull the float ring out of flat. If so, then stop to solve.

Drawing 9



WIRING & CONTROL SYSTEM / TEST MOTOR;
There is no elaborate wiring to do, simply plug the drive motor into the control system, they have twist lock connectors to avoid confusion. If you are on a show venue where other trades use similar connectors, NEVER interchange your connections with other than specified here. Next, simply plug the control system into a 120 volt / 15 amp wall circuit.

Now would be a good time to power up the motor, and ensure the operation, and fine tuning, and levelling, as there is easy access to everything with no MDF top obstructing access.

WARNING!
KEEP HANDS AND FEET AND DEBRIS FREE FROM THE OPERATING STRUCTURE
THIS IS A MACHINE AND IS HAZARDOUS! KEEP KIDS AWAY. Do not step through the decks while in motion.

To power up, you must have all wires connected. Turn the key to power up the control. The control is pre-programmed for a simple GRADUAL startup, top operating speed, and gradual braking, however, you can re-program the VFD (Variable Frequency Drive) to do hundreds of possible speeds and start – stop functions. *Note: Smartstage does not provide technical support for VFD changes*[1]

LEVELLING;
In addition to checking the operation, also fine tune your turntable for leveling and roundness.

Adjustments are required in TWO places, the motor drive, and the wheels you set on the floor at the very beginning of assembly.

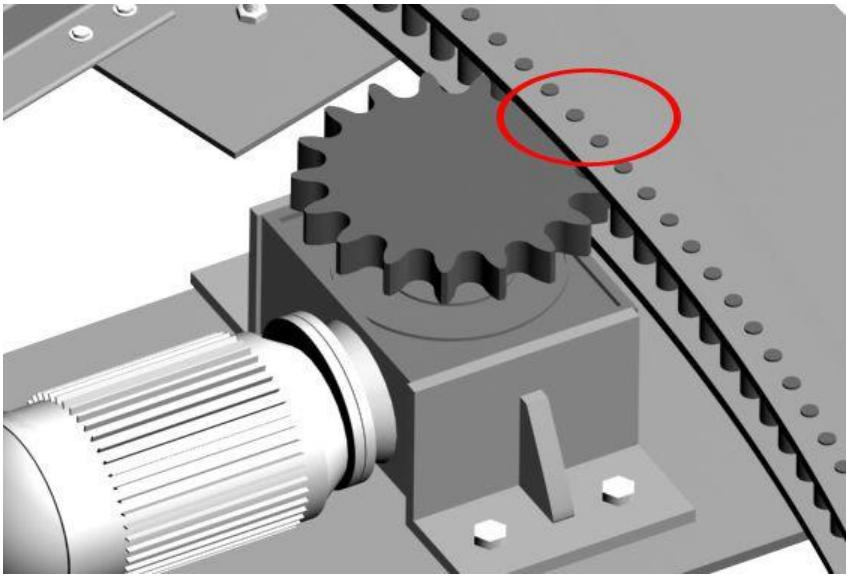
Floors that appear flat, are often not, and having the casters all evenly positioned will ensure quiet and smooth operation. There are several ways to achieve this, you can use a level, or measuring tapes, even eyeball it. We have found the tension test works the best, read on…

The levelling process often requires you to get very familiar with the load dynamics, (getting a feel for how the steel top is responding as it travels). Another, but useful way to level it, is to look for gaps between the wheel and floor, or the wheel and float ring, but ALSO, to FEEL with your adjusting wrench, if there is undue load pressure on the levelling bolts (they will be tight to move). If the bolts have ***no pressure*** (really loose) it is sign that that wheel is too low. So, simply said, if there is a gap, then raise the wheel, if it is really ***compressed***, then lower it.

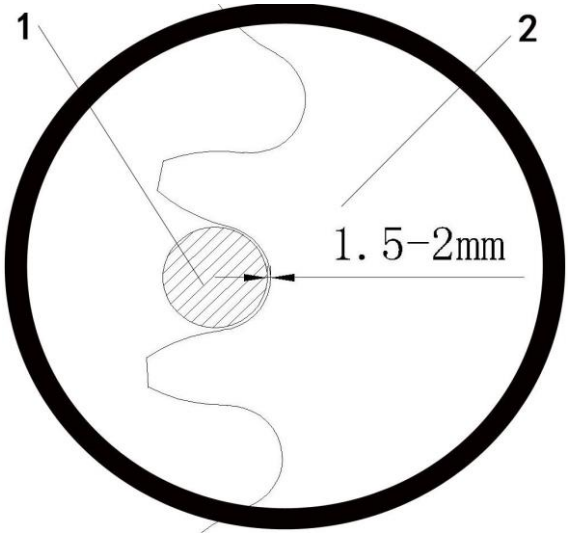
The levelling process takes time, but is a worthwhile effort to do right, and accurately. It often involves hopping back and forth to fine tune, be PATIENT.

The second part of levelling is to ensure the motor is sitting perfectly in HEIGHT, and perfectly where the drive gear engages the float ring pins. (see Drawing 10). There are adjusters for height, and adjusters for depth. There are two things to look for on this gear adjustment: be sure it is not pressured into the pins, not forcing or pressure (will result in noise and wear), also be sure it is not wavering (going deep, then shallow), see Drawing 10 & 11. If it is wavering, the problem is that the float ring was tightened while not perfectly round and ***may*** require loosening of the entire turntable (or part), then manipulating it to perfectly round (use a measure) and then re-tightening.

Drawing 10



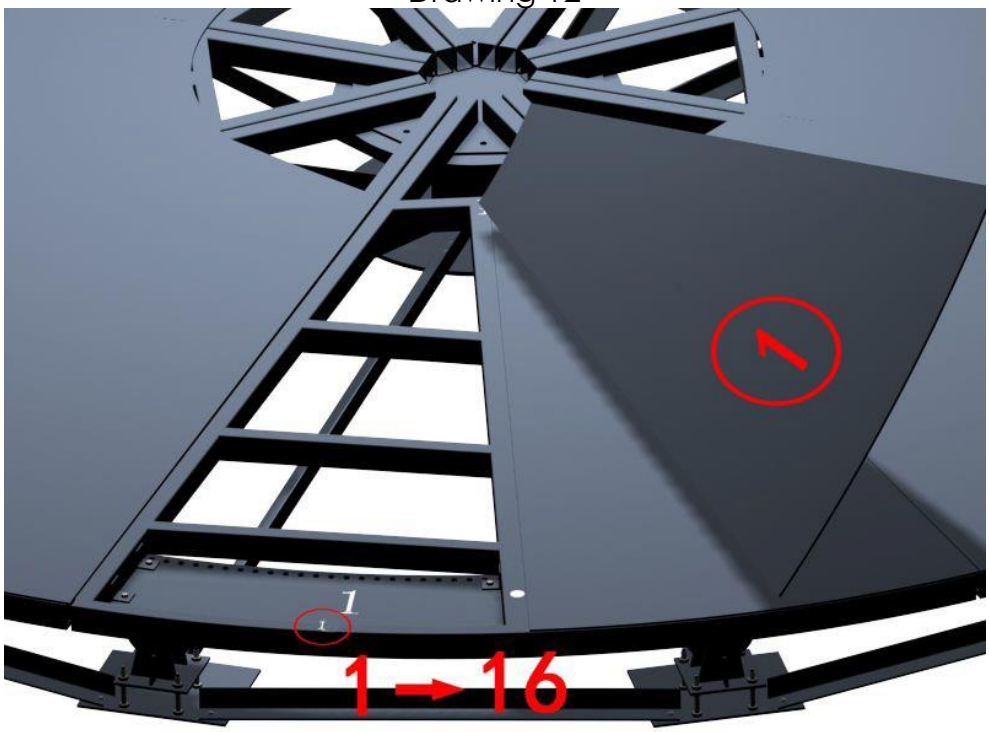
Drawing 11



PHASE 4 - Installation of the MDF top

Now that you are running smooth, you can install the MDF top, simply place the section accordingly, and screw them to the steel frames, see Drawing 12. (*Number of pieces will vary based on model)*.

Drawing 12



ATTENTION!
AFTER INSTALLATION.
Ensure that the finished installation is protected, and all moving parts are covered in a way that the public or children cannot access underneath the turntable, it can cause injury or death if disregarded.

1 VFD (Variable Frequency Drive) Controller

WARNING!
READ AND UNDERSTAND ABOUT VFD.
This may affect your warranty.

Smartstage Heavy Duty (HD) Platforms/Turntables are equipped with a VFD (Variable Frequency Drive). Smartstage has pre-programmed it for basic functions, however, does not directly provide support assistance of a VFD Controller or software interfaces, see our notes below:

- Smartstage manufactures turntables which come with AC motors, and VFD controls.
- VFD controls, which offer hundreds of programming possibilities, can be complicated to program.
- Smartstage's expertise is not in programming, and we do not represent the manufacturer of the control.
- Smartstage provides the turntable, with the drive, and VFD control PRE-PROGRAMMED to give you the basic functions with respect to start up, variable speed, reverse, top speed, and braking.
- The manufacturer of the VFD is Sunye, and they do not offer any support. Helpful Youtube links are available at support.smartstage.com.
- Programming a VFD is a process for those who either are experienced at it, or are willing to undertake the learning, a lengthy time investment.
- Another possible option, in your city, is to find a motor/control company that might have an available technician to come to your sight, a cost to you.
- Smartstage does not program your shows or are responsible in any way to program your shows, nor do we have in-house, or have access to, anyone that can program a VFD.
- The VFD CAN be programmed in many ways that could result in damage to your turntable, and to the people using it, ***please be responsible in this regard.***
- Alteration to the VFD programming as provided by Smartstage will immediately VOID any warranty provided by Smartstage, and not just for the control, but the entire system.

Maintenance

WARNING!
READ AND UNDERSTAND ALL MAINTENANCE PROCEDURES.
Failure to follow all procedures listed below may cause serious injury and a decrease in the equipment's functional existence.

- Frequently check to see that all fasteners are properly engaged.
- Touch up paint can be used to cover any scratches or blemishes sustained through use.
- You can bolt, glue or screw something to your turntable, just be careful: do when turntable is stopped, and unplugged and ensure any fasteners do not impede wiring or mechanical operation.
- The wheels are maintenance free, periodically checking is recommended.
- Replace any damaged equipment with genuine Smartstage products.
- Duty cycle is 8 hours. After 8 hours of operation, we recommend minimum 4 hours of rest. Non-stop operation of your turntable will result in motor failure and result in void of warranty.
- If the motor runs too hot to touch, a built-in fan is provided, and requires wiring, call us for instructions. If it runs too hot, then there is a reason, either overload or running beyond duty cycle.
- The system has been pre-assembled to fit together and work correctly. Do not force any parts, re-drill any holes or assume there are errored parts.

Customer Service

For parts or service contact Smartstage. When ordering parts be sure to provide all relevant information available including the name and part number of the equipment purchased.

Customer Service hours are Monday thru Friday from 8:30 a.m. to 5:00 p.m. Pacific Standard Time.

Smartstage
2510 E Sunset Rd, Ste 5-222
Las Vegas NV 89120 USA
Ph: +1.702.880.0011
smartstage.com