

# PHOEBE TABLE

SATURN DESIGN

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The Phoebe Table is composed of up to 24 crescent leaves plus a round Terminus for open shapes that can be set on each other within a 30 degree range of arc. The smallest circle is 60" diameter with 12 leaves, the largest is 90" with 24 leaves. It is 18' long and 30" wide as a straight line with all 24 leaves. There are 30 legs available.

18'



30"



60" dia

90" dia





Humanity has always been awestricken by the celestial eclipse and thus the crescent resonates so strongly with us. The crescent is an elemental shape. It is two non-congruent circular arcs connected at their end points, concave in the same direction. In this case the arcs are the same 30" diameter. The crescent can be seen as the result of one circle eclipsing another.

The top is veneered with quartersawn mahogany that is highly chatoyent with a subtle crossfire. I came across it 15 years ago and have been saving it for a piece worthy of its beauty. Each crescent leaf, as well as the terminus, is veneered as though it were a starburst radial pattern. This pattern originates at the implied center of the cricle of the outer edge of the crescent. A starburst pattern with a highly chatoyent wood is very active when you walk around it. The flashes and changes in color follow you as you move. That effect is multiplied in this design. Each leaf flashes incrementally differently because you are in a slightly different angle to each one. You see the starburst from twelve angles at once and the flashes all move as you do. The effect is dazzling and mesmerizing.



The starburst veneered crescent motif lends the table a compelling rhythm. That motif is echoed in the soft golden patina of the nickel apron. But the 1/2" apron is not simple decoration. It is essential to the function of the table. It is visually separated from the wood top by a 1/4" reveal. There is space in that reveal and behind the apron for a custom designed latch to hook onto and cinch two crescents firmly together.

The latch design is integral to the design of the whole table. I designed it to fit within the thickness of the leaf while leaving enough material in the leaf for it to be well secured and for the leaf to maintain its stiffness. The latch handles had to be graspable in all positions. I wanted the leaves to be compactly storable which is why I kept everything within a 2" thickness envelope.

Each leaf has a latch that assumes three positions: ready to engage, loosely attached and cinched. The picture below shows the ready to engage position.



Ready to engage, the hook is parallel to the table and may be inserted into the reveal of the next leaf or of the terminus.

In the loosely attached position (shown below) the hook is rotated perpendicular to the table top to engage the apron. The leaves are secured, but still movable.



When the handle pivots into the tightly attached position, its cam end pulls the hook, and therefore the apron of the engaged leaf, tightly to its crescent. You see a hint of the Belleville springs that serve to modulate the tension on the apron so it is not too tight.

The latches were hand made of nickel plated steel at Saturn Design.



You will notice in the last picture on the previous page, a set of holes just inside the bottom of the apron labeled as Arc Stops. These accept a 1/4" pin which functions as a stop on an inserted latch. They make setting the table to specific arcs easy and consistent. There are stops for circles of 14 leaves, 16 leaves, and so on up to 24 leaves. In addition, there are stops for arcs larger than the 90" diameter of all 24 leaves connected in a circle. There are stops for arcs with 10', 12', 16', and 20' diameter. The latch hook should be on the inside (toward the center of the leaf) of the pin to get the correct curve.

Those holes are in another functional part called the leg rails. There is an inner and outer leg rail on each leaf. These rails were designed to allow the legs to attach easily, adjust easily and be robust when cinched down. This approach to leg attachment offers the most flexibility for the end user's design. The outer rail also became the mounting support for the apron. As a curved "L" section the two unified elements lend each other stiffness and stability.

The Terminus is also 30" diameter and 2" thick. It has two sets of leg rails. The large set matches the leg rails of the leaves in diameter. The small set is for more leg placement options, again, to allow the end user the most design flexibility.



The following photos show how the leg is attached to the rail. There is a leg nut that screws on to the leg with a 3/8 acme threaded stud. The acme thread was chosen to provide the greatest strength, smoothest cinching, and most longevity.



Leg Nut







There are 30 legs available. Each leg is adjustable in height by the following mechanism.



I designed and fabricated the white UHMW plastic rings pictured below to solve the problem of securing the foot rod inside the leg tube and of holding the wood foot rod in different height positions without marring it. The rings function as a non-marring circular spring clamp and centering device. They are slightly oversized for the inside of the tube. A chamfer, the slippery nature of UHMW and the slight spring of their geometry lets them squeeze into the tube and as a result, cinch down on the wood foot keeping it rigidly in place. When it is not in the leg tube the wood foot slides easily and smoothly through the plastic ring for assembly or adjustment to a different length.





I designed and fabricated the foot rod top guide out of UHMW as well. It has similar spring and centering functions as the white ring above but is configured to get past the internal stops in the leg tube.



The sequence below shows the wood foot being set into the metal leg tube.



The two photos below show the superior approach to custom glides fabricated in house. The milled glide is extremely robust. It is set into a mating hole in the end of the leg. It can't get knocked out or dislodged like tack glides.



The purpose of this document is to illustrate some of the innovations and details of the Phoebe Table. The sum of these is to manifest the Phoebe Table's greatest innovation: the owner can apply her own creativity to the shape and function of the table. The Phoebe Table is itself a sculptural medium. For those who use a space for multiple functions, for those with unusually shaped spaces, for those who appreciate rhythm and beauty, for those with creativity and something to say:

The Phoebe Table.



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"Phoebe's Table Dance at Saturn Design"  
(on YouTube and Vimeo) is a lightly amusing short stop action film illustrating some of the possibilities for top shapes and leg placement. Please enjoy.