

STANDARD LIFTERS

MAKING INNOVATION THE STANDARD®



Engineering Data Rail Lifters

<p>Product Options</p>	
<p>Component Dimensioned Prints</p>	<p>Slip Fit For Dowel "E" = \varnothing .3125in "M" = \varnothing 8mm (2) Places</p> <p>Drilled & C'bored For "E" = 5/16" SHCS "M" = M8 SHCS (4) Places</p> <p>1" - 12 Tap For Spring Can For \varnothing .750" Guide Pin (2) Places</p> <p>Tap For Jack Screw "E" = 5/16" - 18 "M" = M8-1.25 (2) Places</p> <p>Drilled & C'bored for "E" = 3/8" SHCS "M" = M10 SHCS (2) Places</p>
<p>Machining Guidelines</p>	<p>Drill & Ream PF for Dowel "E" = \varnothing .3125in "M" = \varnothing 8mm (2) Places</p> <p>"E" = 5/16" - 18 Tap "M" = M8-1.25 Tap (4) Places</p> <p>\varnothing 1.13in [28.6mm] Drill Clearance For Spring Can</p> <p>\varnothing 1.25in [31.8mm] Drill Clearance For Guide Pins (2) Places</p>

Bolt-On Ready Stock Rails

May be covered by one or more of the following patents:
6,848,290 - 7,024,910 - 7,730,757 - 7,950,262 - and other Patents Pending

Online Cad Options

Online Model Configurator

The Online Model Configurator is a tool that allows you to select the options of the product you need and then builds the model assembly for you.

View Next Page Showing records 1 through 15 of 640

Product Number	Units	Base Style	Guide Pin Length (in)	Bushing Length (in)
	Select ▼	Select ▼	Select ▼	Select ▼
	Reset Sort	Reset Sort	Reset Sort	Reset Sort
GK120-A-E-1.75	English	A	1.750	1.500
GK120-B-E-1.75	English	B	1.750	1.500
GK120-A-E-1.875	English	A	1.875	1.500
GK120-B-E-1.875	English	B	1.875	1.500
GK120-A-E-2	English	A	2.000	1.500
GK120-B-E-2	English	B	2.000	1.500
GK120-A-E-2.125	English	A	2.125	1.500
GK120-B-E-2.125	English	B	2.125	1.500
GK120-A-E-2.25	English	A	2.250	1.500
GK120-B-E-2.25	English	B	2.250	1.500
GK120-F2-E-2.25	English	F2	2.250	2.000
GK120-H2-E-2.25	English	H2	2.250	2.000
GK120-A-E-2.375	English	A	2.375	1.500
GK120-B-E-2.375	English	B	2.375	1.500
GK120-F2-E-2.375	English	F2	2.375	2.000

You start by selecting the attributes of the product you desire

As you select the individual attributes of the product, the list of available product numbers is filtered down.

Attributes	Values
Travel (0 to 2.875)	<input type="text" value="0"/> <input type="button" value="Set"/>
Type	GK120 STD
Units	English
Base Style	H2
Guide Pin Length (in)	5.000
Bushing Length (in)	2.000
Base Diameter (in)	1.865
Base Thickness above Mount (in)	1.000

Once you choose a product number you enter any "dynamic" attributes such as Travel.

Product Details for GK120-H2-E-5
Category: GK120 Standard

[Printer friendly view](#)

▼

There are 18 different file formats to choose from.

Individual CAD Models

There are individual CAD models available if you desire to build your own assembly. Each of the parts are separate and are in a STEP format.

Product Scope

Series	Base Lengths Available
<p>SM12</p>	<p>1.25" Wide 5.38" to 14.00" Long</p>
<p>SM20</p>	<p>2.00" Wide 4.00" Long</p>
<p>SL19</p>	<p>1.90" Wide 7.00" to 18.00" Long</p>
<p>SL25</p>	<p>2.50" Wide 6.75" to 18.00" Long</p>

General Information

Lifter Recommendations

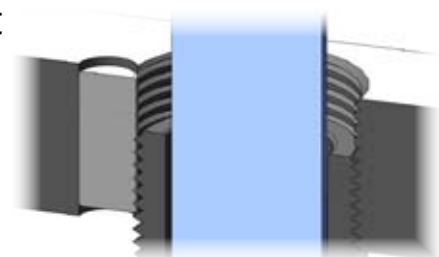
- Made to Order Top Plates should not exceed 160% of the Base length
- Lifter Bases and Top Plates should be clearly marked for Location and Orientation.
- Top Plates should be secured to the Guide Pins using Nylon patched screws to prevent loosening during operation.
- Extended Bushings are recommended when there is room in the design to use them.

Lifter Details

- Gas Springs are NOT included with the assembly and will need to be purchased separately from your preferred source. You will be provided with the Qty and Size of the Gas Spring needed at the time you place the order.
- Top Plates are manufactured from Machinable 4140 Steel.

Lifter Precautions

- Confirm that the clearance under the Lifter Base for the Guide Pins is adequate when the Lifter is fully traveled.
- Drive the Lifter directly above or on each side of the Gas Spring location(s). This will prevent side forces on the Gas Spring, Guide Pins, and Bushings.
- Leave .025" between the Lifter and adjacent details.
- Be sure to tighten the set screw onto the Spring Can during the die build process to prevent the Spring Can from loosening.
- At the end of the die build process, you must install the Spring Can Locking Dowel to permanently lock the Spring Can and prevent it from coming loose in production.





Things to Consider

Below are three main things you should consider when deciding which style of Rail Lifter to design into your application. We offer many options, based on the die build process and personal preferences, to provide the best possible solution.

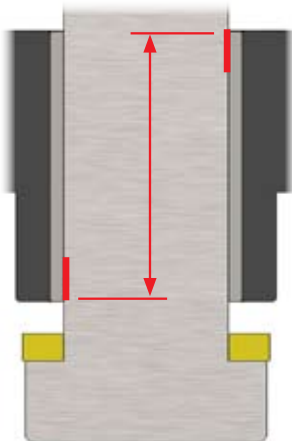
Lifter Series

SM Series			SL Series		
Guide Pin Diameter	Minimum Base Width	Gas Spring Diameter	Guide Pin Diameter	Minimum Base Width	Gas Spring Diameter
.75"	1.25"	19mm	1.25"	1.90"	25mm

Made to Order Top Plates

"A" Model	"C" Model
Standard Top Plate	Made to Order
<ul style="list-style-type: none"> The Top Plate is the same width and length as the Base Plate Includes holes that allow a Hex Wrench to pass thru it for loosening the screws in the Base Plate 	<ul style="list-style-type: none"> You provide a Dimensioned Print and we do all the custom machining for you No need for you to setup and do additional machining in-house
 <p>A photograph of a standard top plate, a rectangular metal plate with several circular holes. The part number 'SL19-7A-E' is visible on the surface.</p>	 <p>A photograph of a custom-made top plate, which is a long, narrow metal plate with several circular holes and a different profile than the standard one.</p>

Bushing Length



When the Top Plate is subjected to a side load the guide Pin makes contact with two primary areas (see red lines on the picture to the left).

The greater the distance between these areas, the less amount of movement that can occur.

Longer Bushings are important on Lifters with long Guide Pins and/or long travel.

A longer bushing provides more surface area in contact with the Guide Pin, which extends the life of the Lifter.

At times, adding 30% to the length of the bushing can double the life.

Made to Order Top Plate Checklist

**In short, we send your file to our machining department and all of the dimensions and information they require need to be on your print.*

- We prefer that the file be sent as a PDF
- Remove all Lifter Base entities from print
- Create Side Views as needed - especially for Top Plates that are not standard thickness
- Guide Pin connection holes need to be shown and locations dimensioned
- Reamed Holes need to be labeled for fit and the depth dimensioned
- Contours need to be fully dimensioned
- Dimension off a corner not a hole - preferably off the back left or front right corner
- Dimension's need to include a callout in English units even if Metric is primary
- If the tolerance of your dimension is not noted, we will use the chart shown below to determine it

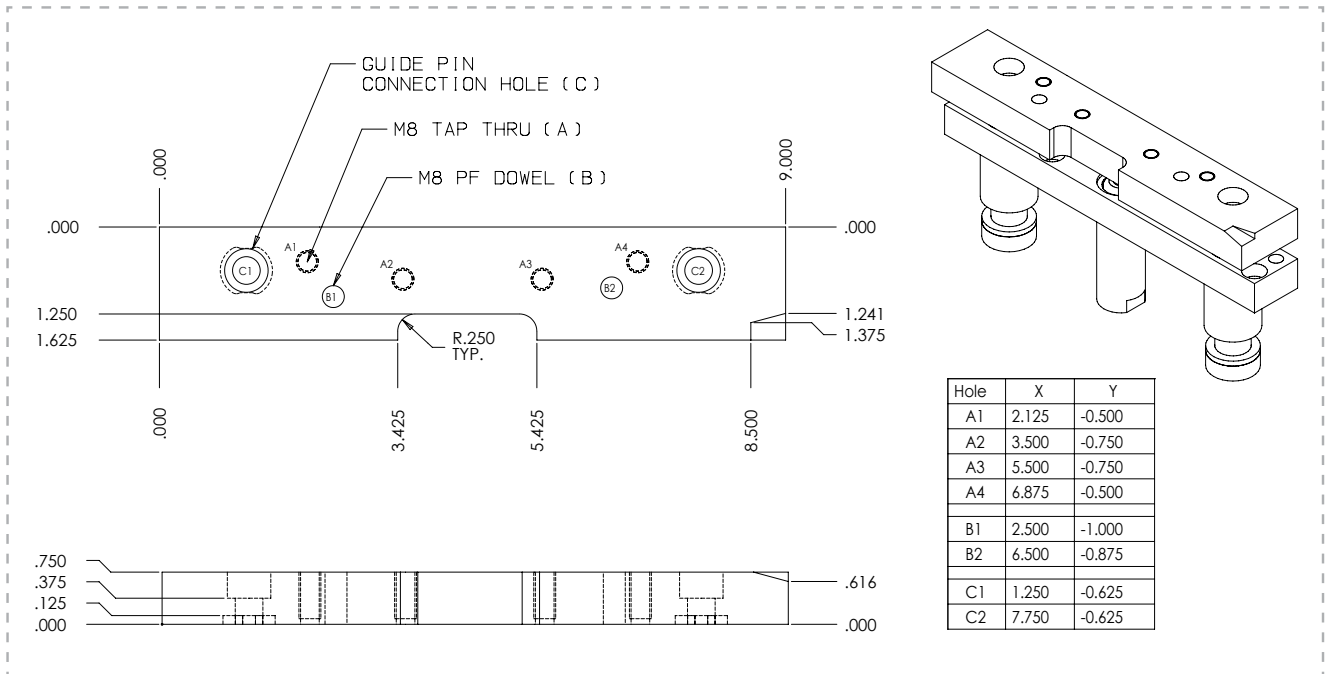
Tolerances:

	Fractional	Angular	2 Place Dec.	3 Place Dec.	4 Place Dec.
English	+ - 1/16"	+ - 5 Deg.	+ - .010"	+ - .001"	+ - .0003"

Unless otherwise specified ...

- Reamed Holes will be 1.5 times diameter deep or through
- Tapped holes will be 2 times diameter deep or through
- Contours will have a tolerance of +/- .003"
- Reamed holes will be machined with a nominal ream
- All sharp edges will be chamfered or deburred
- If a hole is dimensioned without a call out it will be assumed to be a drilled hole

Made to Order Top Plate Dimensioned Print Example



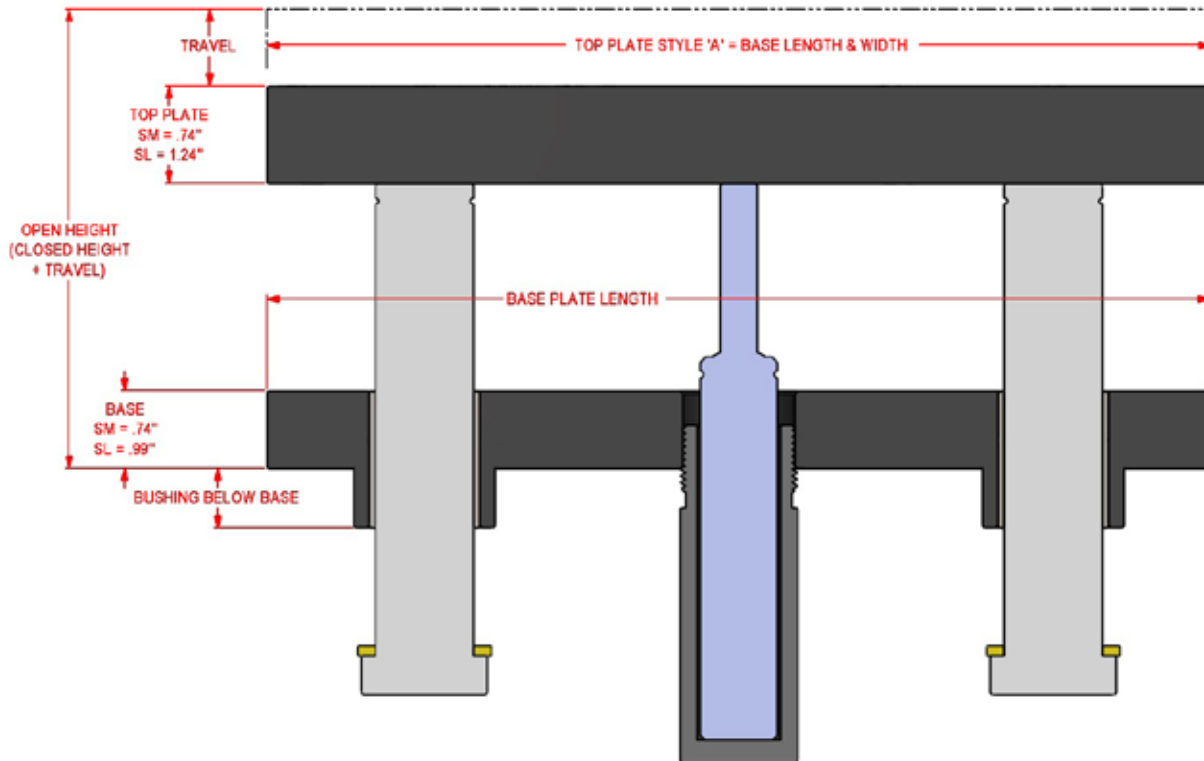
Another Option

If you desire a Top Plate that is a custom length and width, but would prefer to do the machining in-house, please do the following:

1. Send us a print of the Top Plate
2. Dimension the Length, Width and Locations of the Guide Pins
3. Note on the print that you will be performing the additional machining in-house

Part # Structure

Lifter Series	English/ Metric	Open Lifter Height	Travel	Base Length	Bushing Below Base	Top Plate Style
SM12	E	4.25	1.726	5.375	1.25	A
	E or M	in .125" Inc.		See prints for options		A or C
Example: SM12-E-4.25-1.726-5.375-1.25-A						



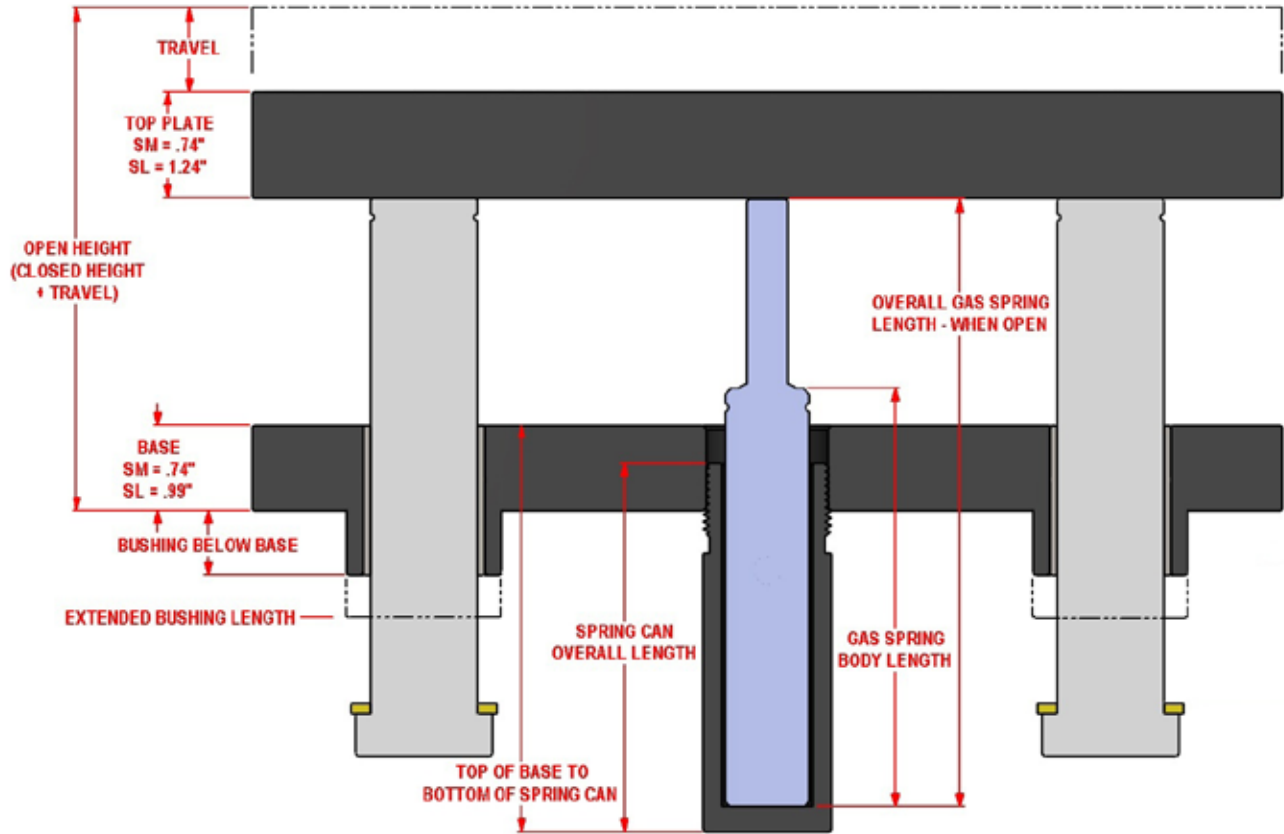
Pricing - Units with A Model Top Plates

	Base Length	Min. Ht	Starting Price	Add - per .125" in Height	Max Ht
SM12	5.38"	1.625"	\$211	\$1.50	9.000"
	9.00"		\$236	\$1.50	
	14.00"		\$298	\$2.00	
SM20	4.00"		\$211	\$1.50	
SL19	7.00"	2.375"	\$309	\$2.00	10.000"
	12.00"		\$334	\$2.00	
	18.00"		\$469	\$2.25	
SL25	6.75"		\$309	\$2.00	
	12.00"		\$334	\$2.00	
	18.00"		\$469	\$2.25	

*Add the SL quoted cost of the Top Plate machining to the price above.

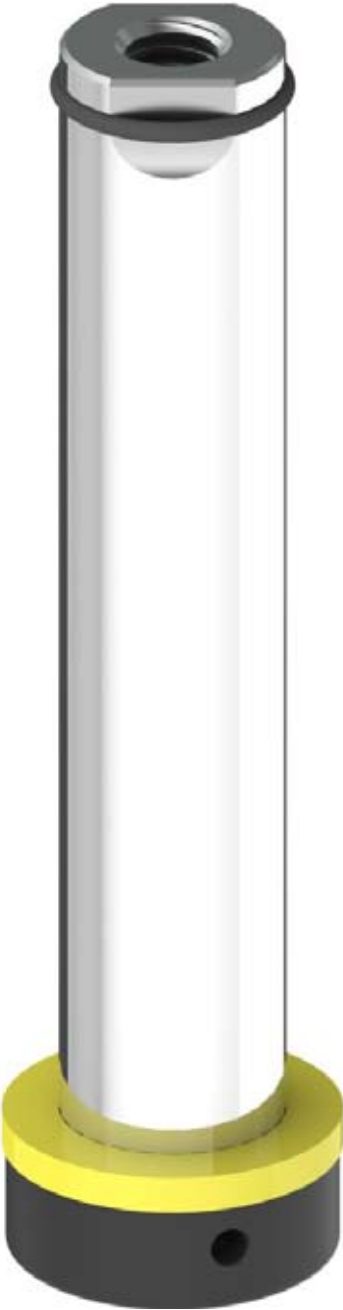

Configuration Information

Below is a diagram that provides details on how the Lifter assemblies are configured. Complete configuration information is available at www.standardlifters.com - on the "Individual Cad Models" page.



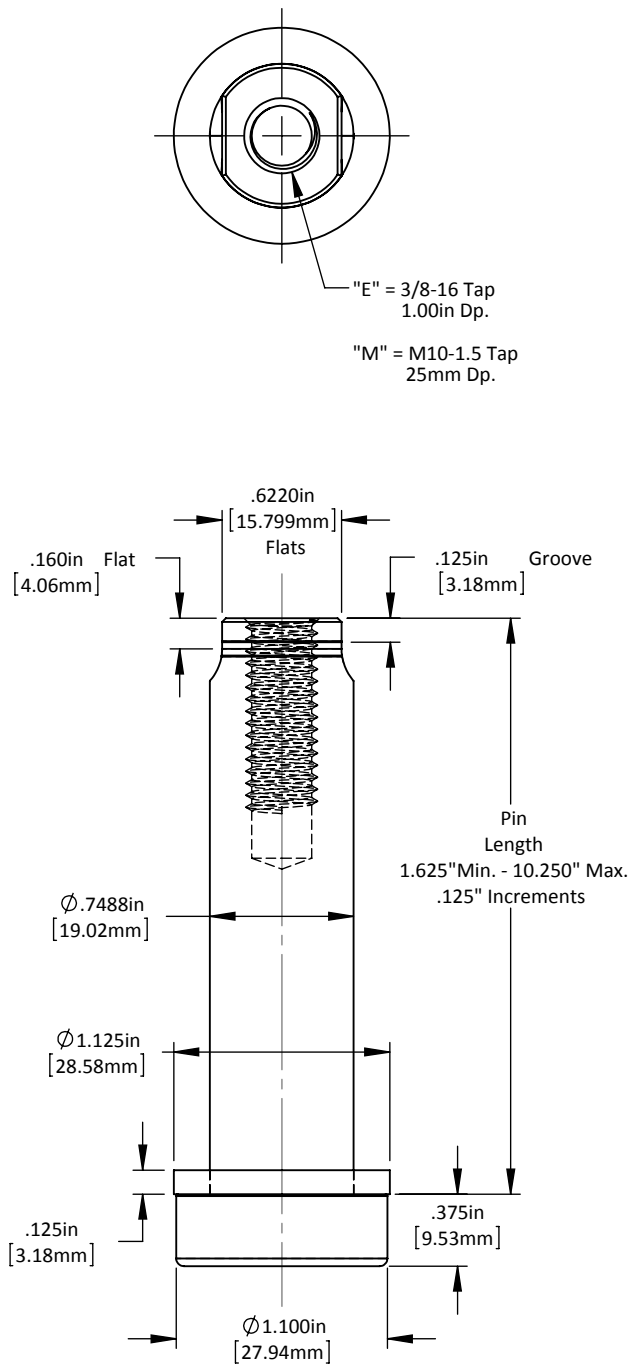
Open Height	Travel (up to)	Top Plate Thickness	Bushing Length Below the Base	Gas Spring Size(mm)	Spring Can OAL Length	Guide Pin Length	OAL Gas Spring Length	Gas Spring Body Length	Top of Base to Bottom of Can
1.625	0.125	0.75	0.500	15	2.875	1.625	2.835	2.195	3.010
1.750	0.250	0.75	0.500	15	2.875	1.750	2.835	2.195	2.885
1.875	0.375	0.75	0.500	25	3.250	1.875	3.622	2.589	3.547
2.000	0.500	0.75	0.500	25	3.250	2.000	3.622	2.589	3.422
2.125	0.625	0.75	0.500	25	3.250	2.125	3.622	2.589	3.297
2.250	0.750	0.75	0.500	25	2.875	2.250	3.622	2.589	3.172
2.375	0.875	0.75	0.500	25	2.875	2.375	3.622	2.589	3.047
2.500	0.886	0.75	0.500	25	2.875	2.500	3.622	2.589	2.922
2.500	1.000	0.75	0.500	38	3.625	2.500	4.646	3.101	3.946
2.625	1.125	0.75	0.500	38	3.625	2.625	4.646	3.101	3.821
2.750	1.250	0.75	0.500	38	3.625	2.750	4.646	3.101	3.696
2.875	1.346	0.75	0.500	38	3.250	2.875	4.646	3.101	3.571
2.875	1.375	0.75	0.500	50	4.375	2.875	5.591	3.573	4.516
3.000	1.346	0.75	0.500	38	3.250	3.000	4.646	3.101	3.446

SM12/SM20 Components

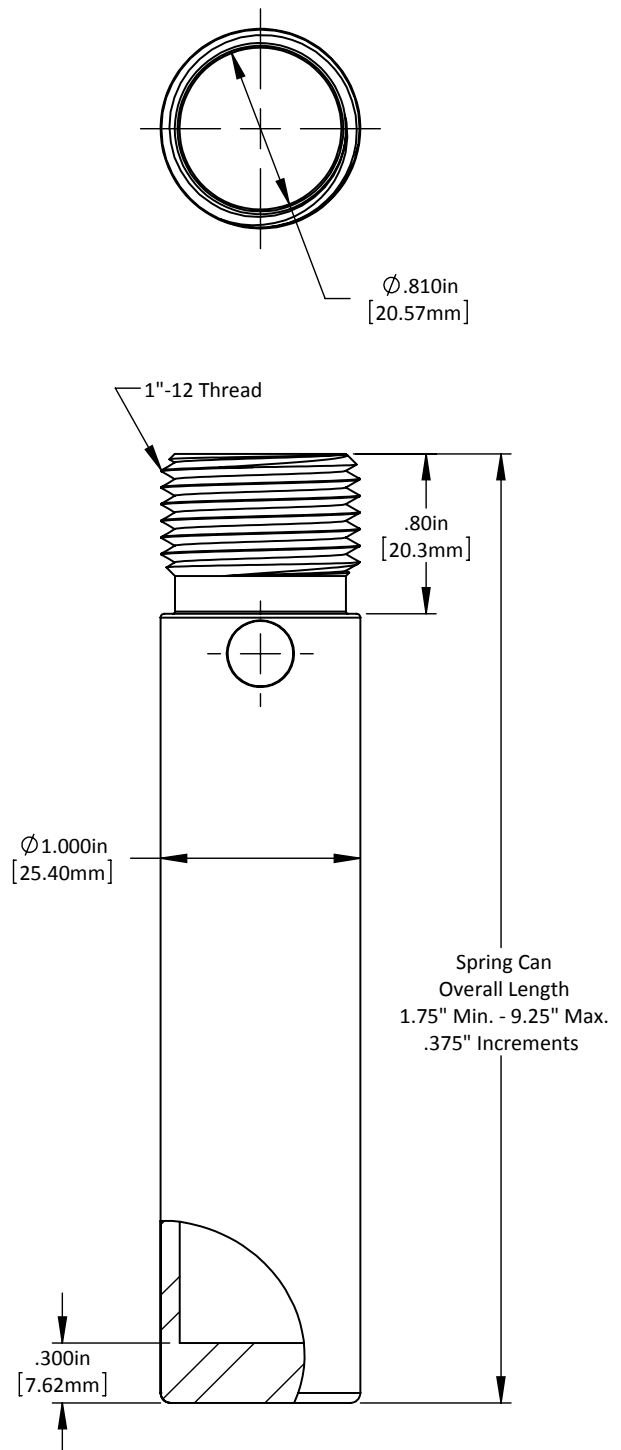
Guide Pin	Spring Can	Gas Spring
		
<ul style="list-style-type: none"> • .75" Diameter • 1.625" - 10.250" Long • 3/8" or M10 Tap 	<ul style="list-style-type: none"> • 1.00" Outside Diameter • 1.75" - 9.25" Long in 3/8" Length Increments 	<ul style="list-style-type: none"> • 19mm Diameter • Brand of your choice • NOT Provided by SL • Part # Reference Sheet available upon request

SM12/SM20 Component Prints

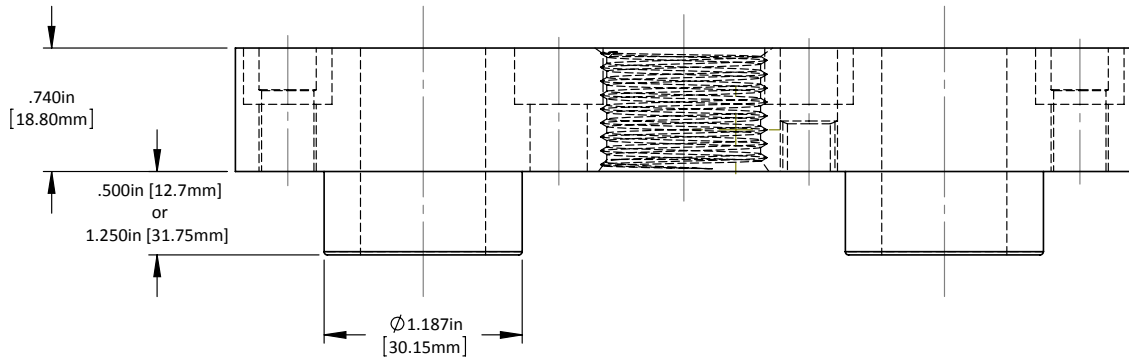
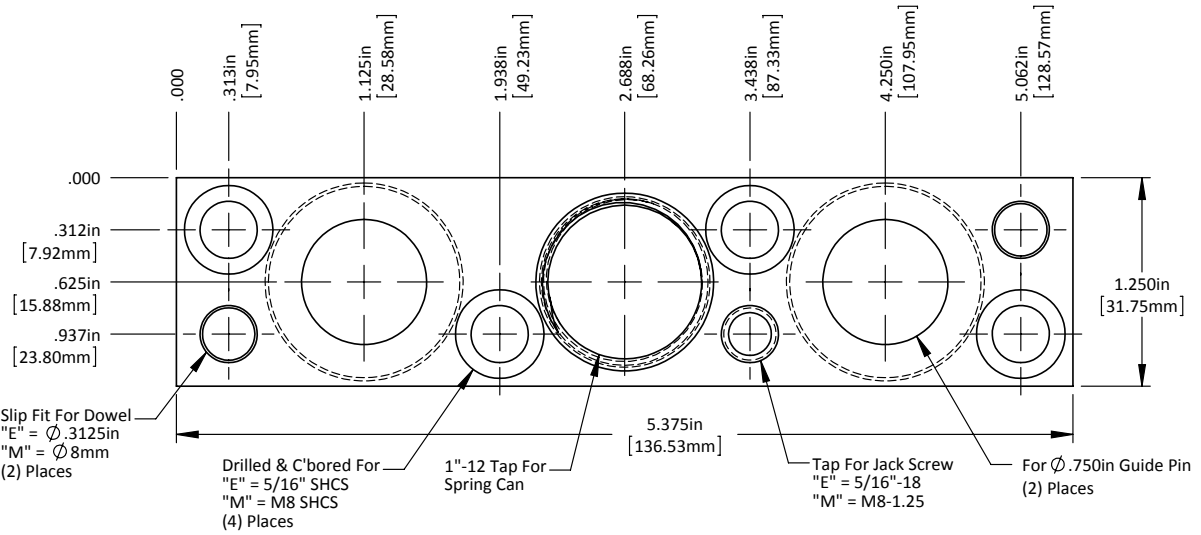
Guide Pin



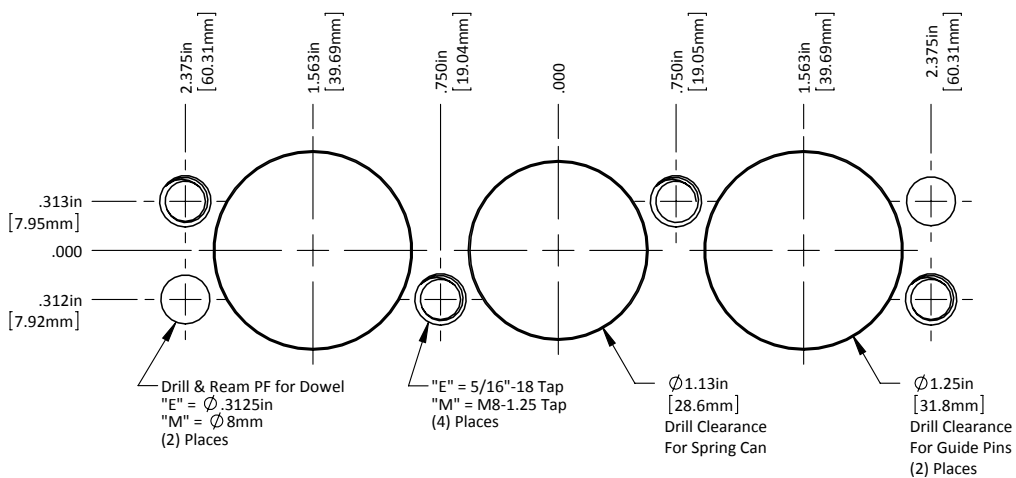
Spring Can



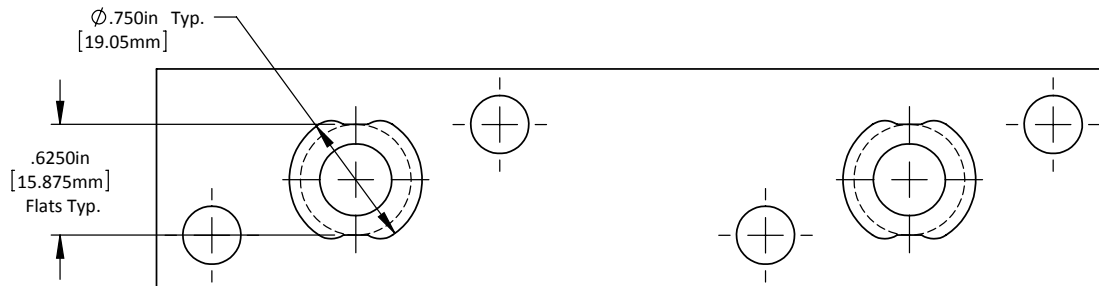
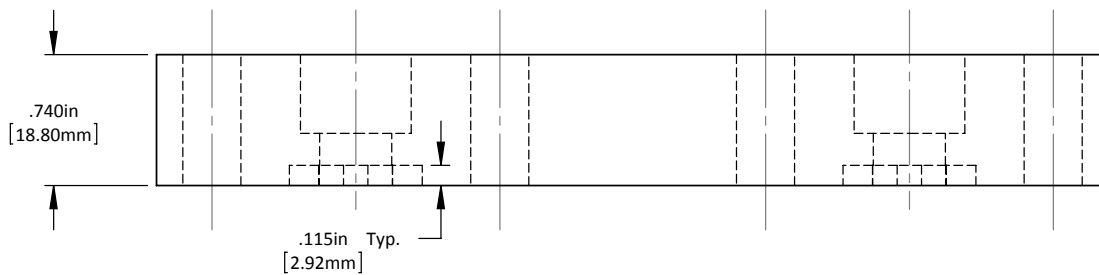
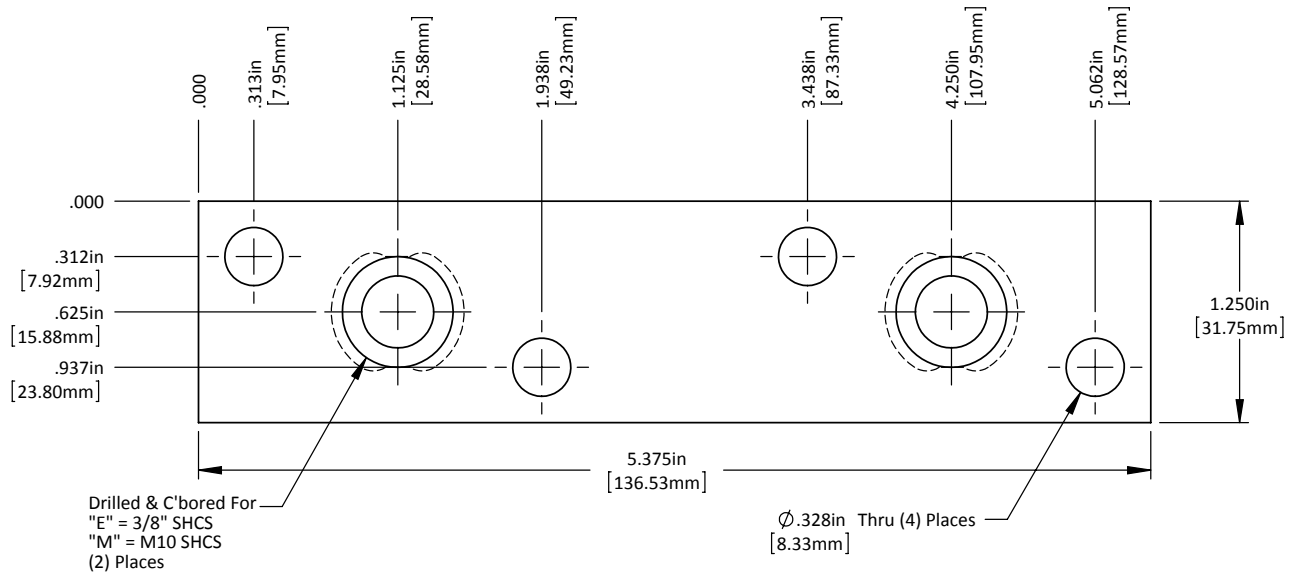
SM12 - 5.38 - Base



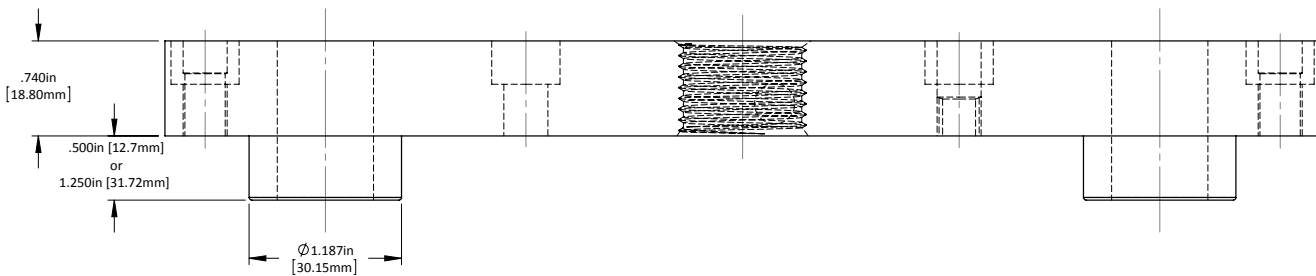
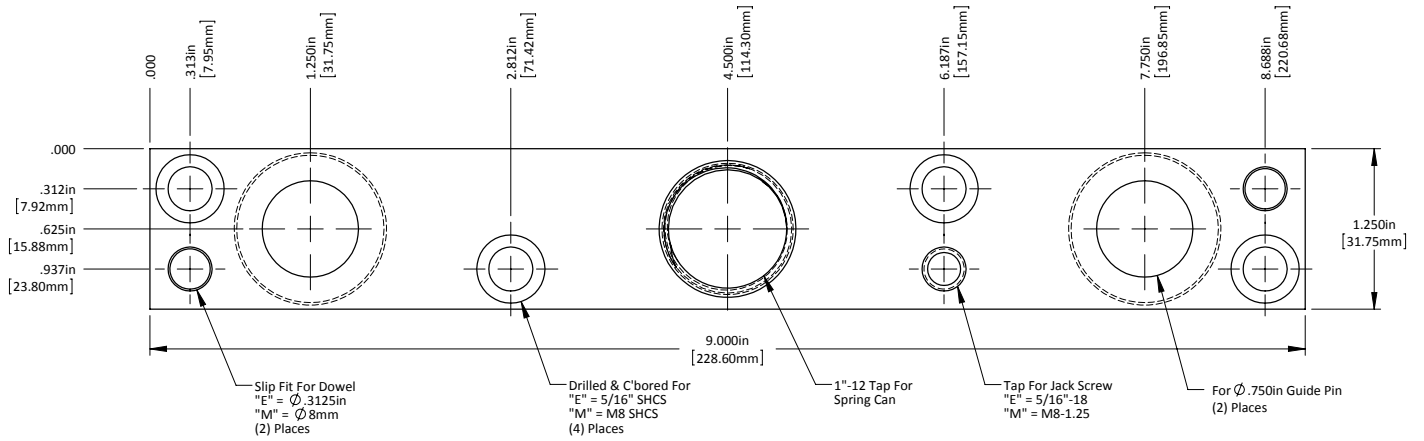
Machining



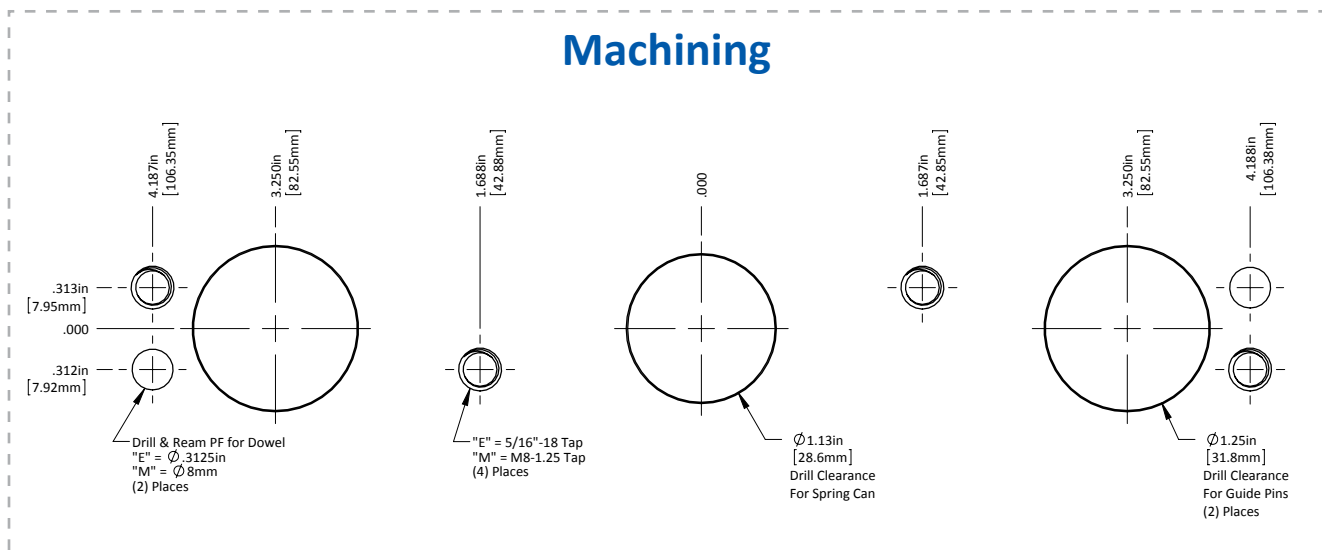
SM12 - 5.38 - A Top Plate



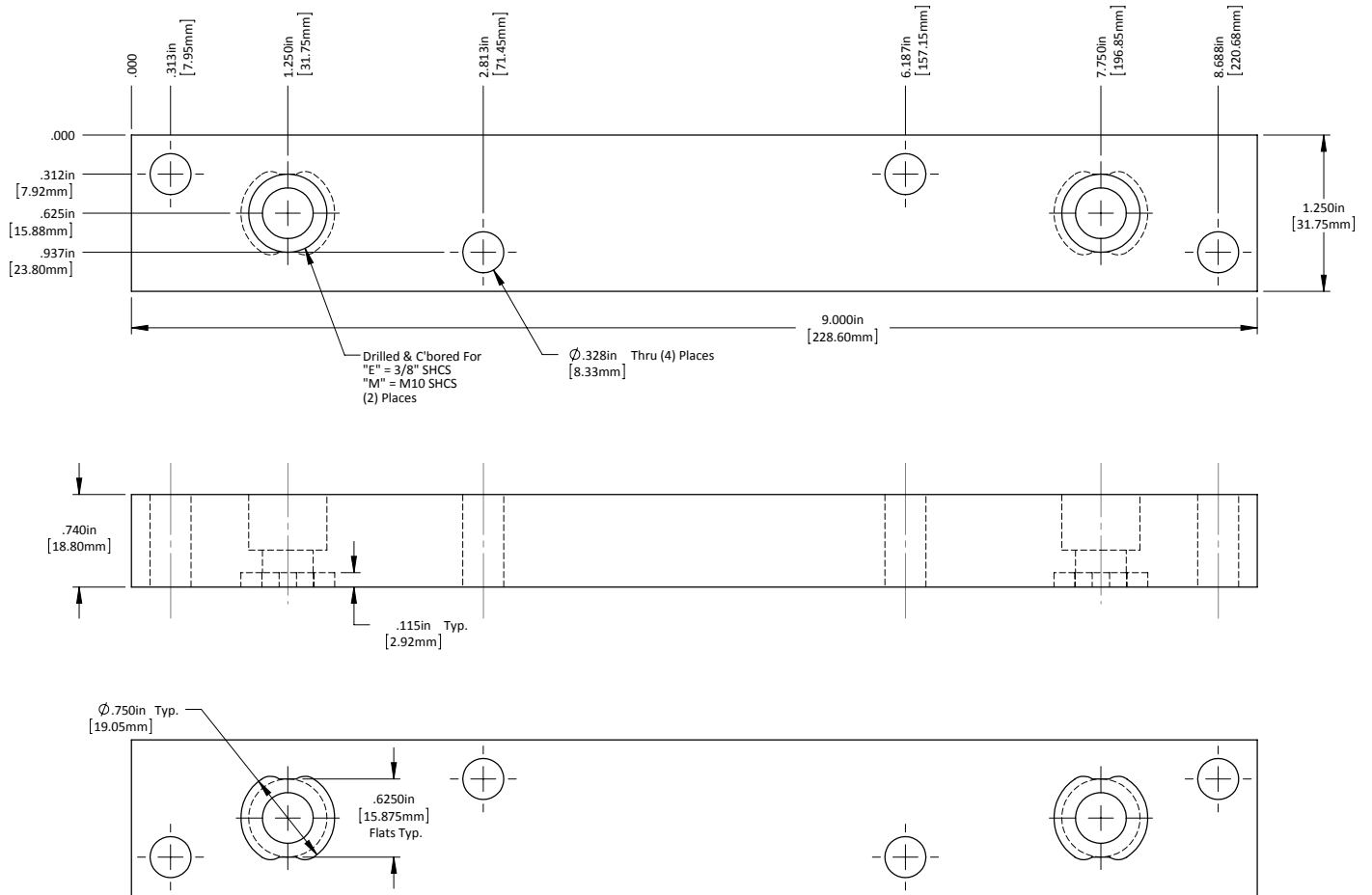
SM12 - 9.00 - Base



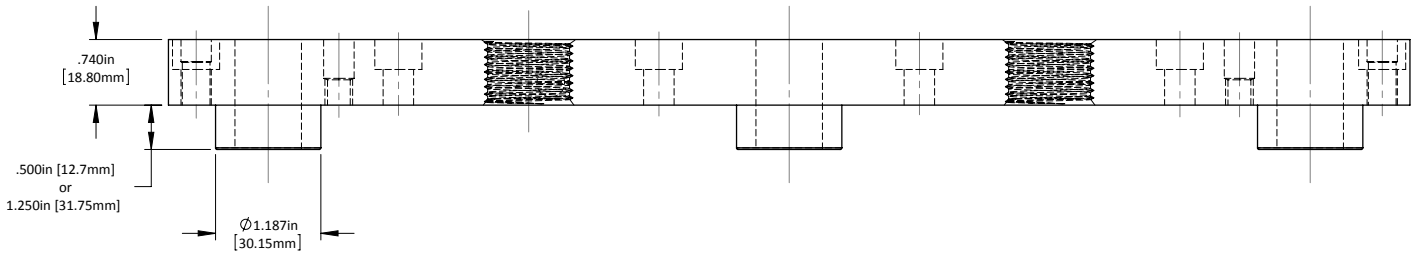
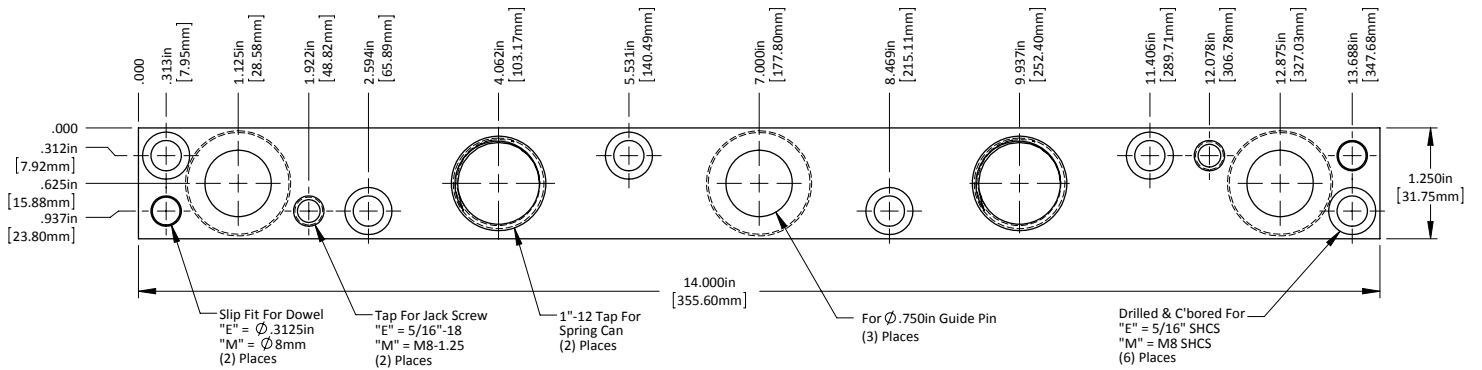
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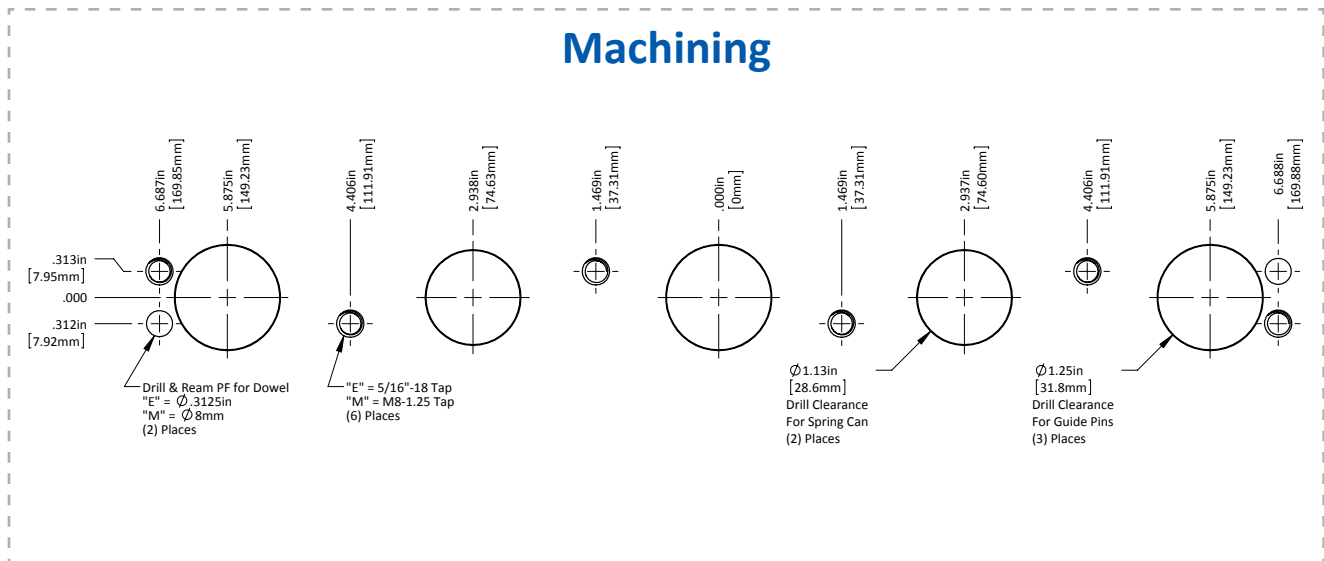
SM12 - 9.00 - A Top Plate



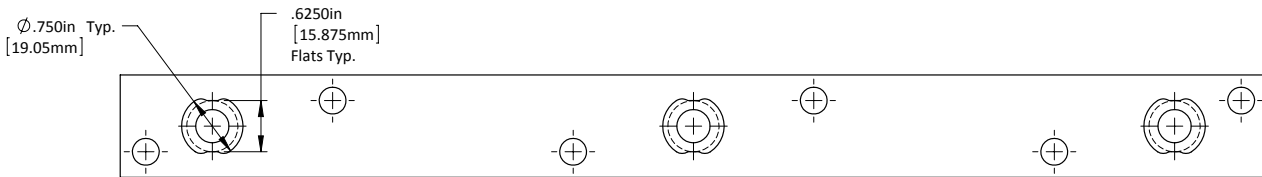
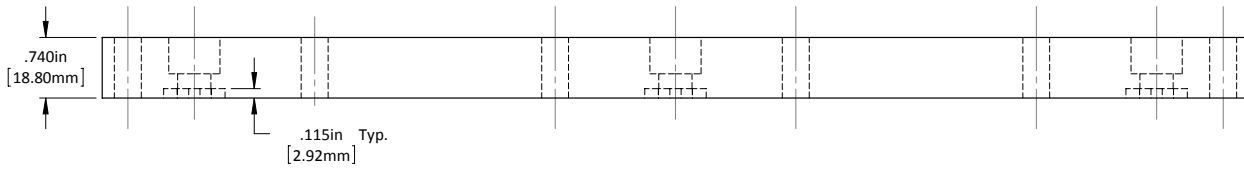
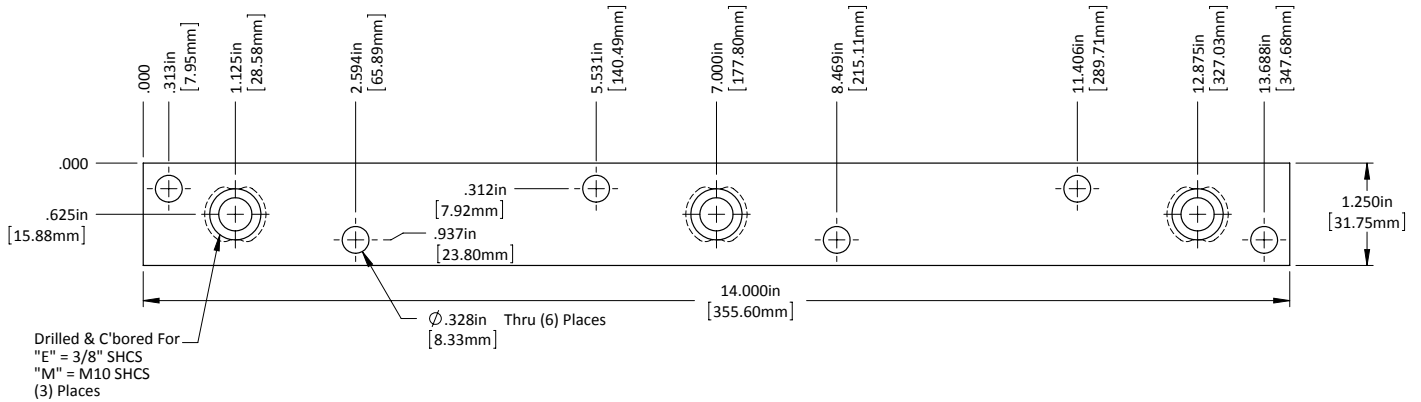
SM12 - 14.00 - Base



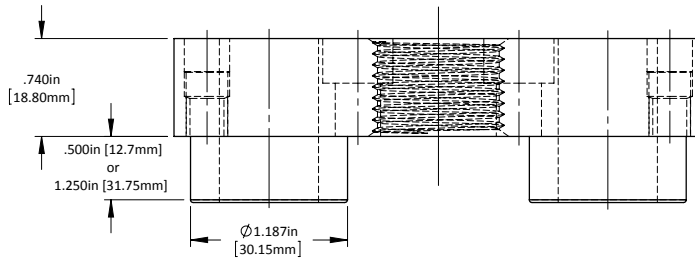
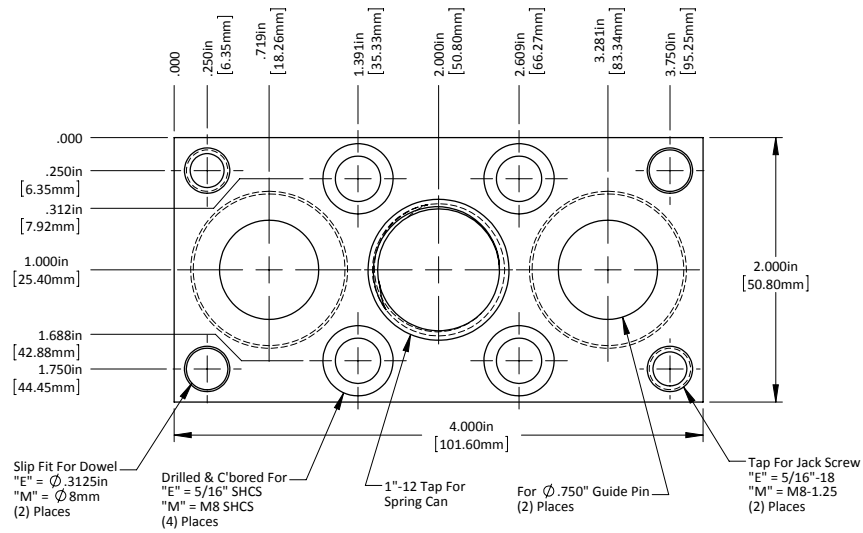
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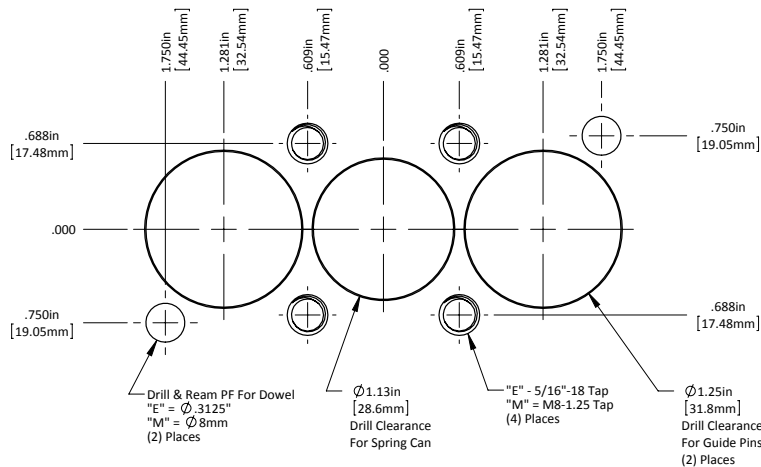
SM12 - 14.00 - A Top Plate



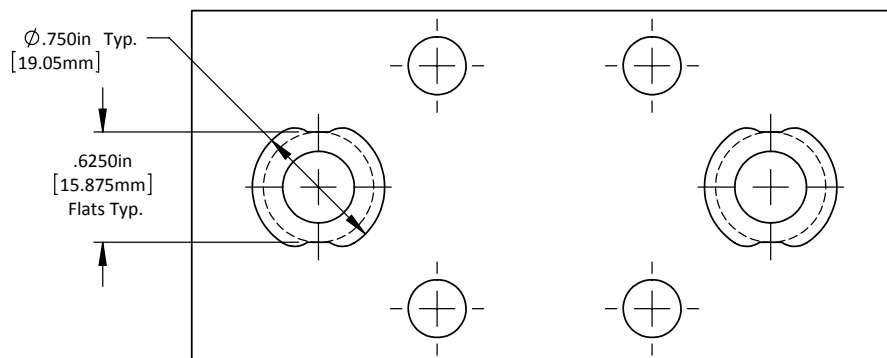
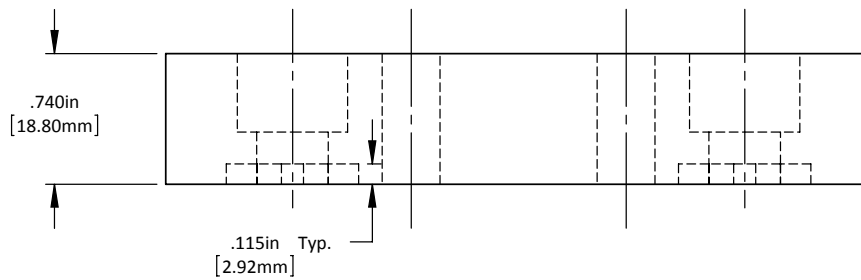
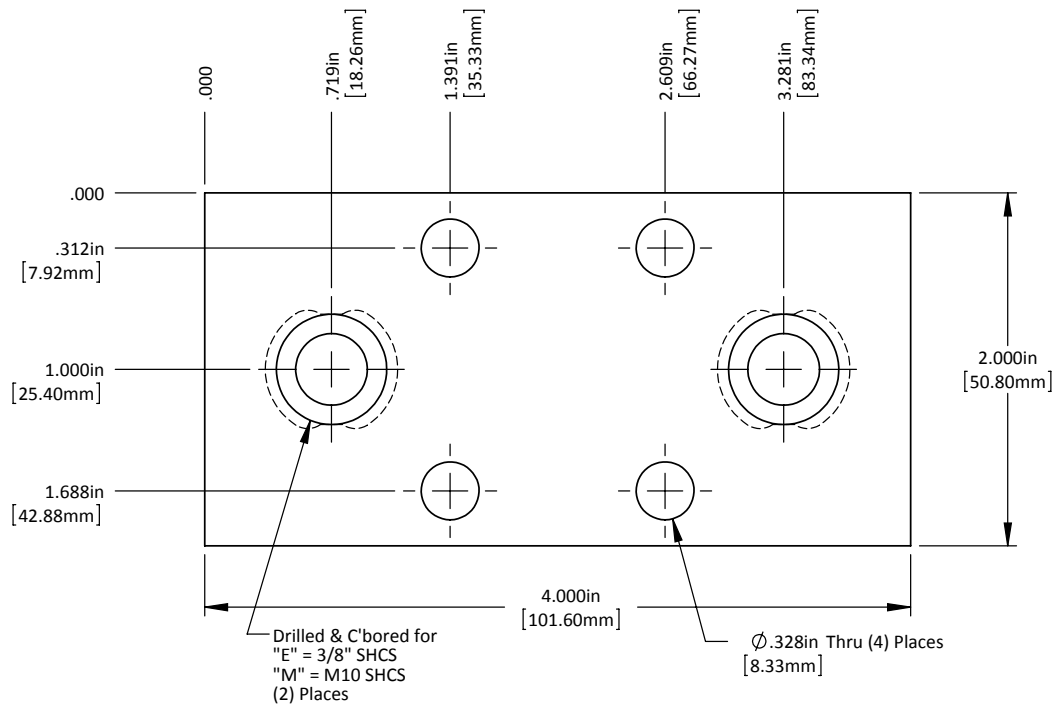
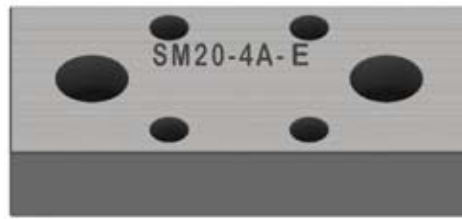
SM20 - 4.00 - Base



Machining



SM20 - 4.00 - A Top Plate

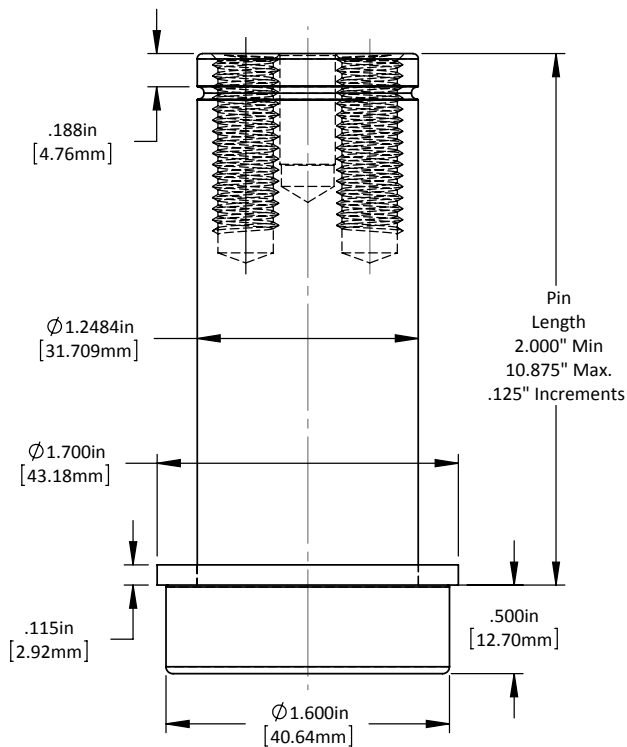
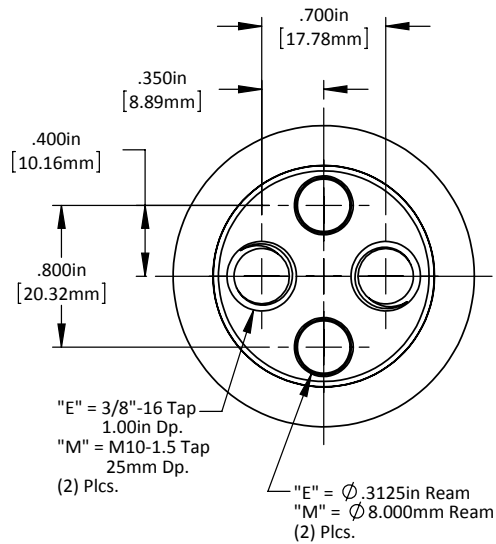


SL19/SL25 Components

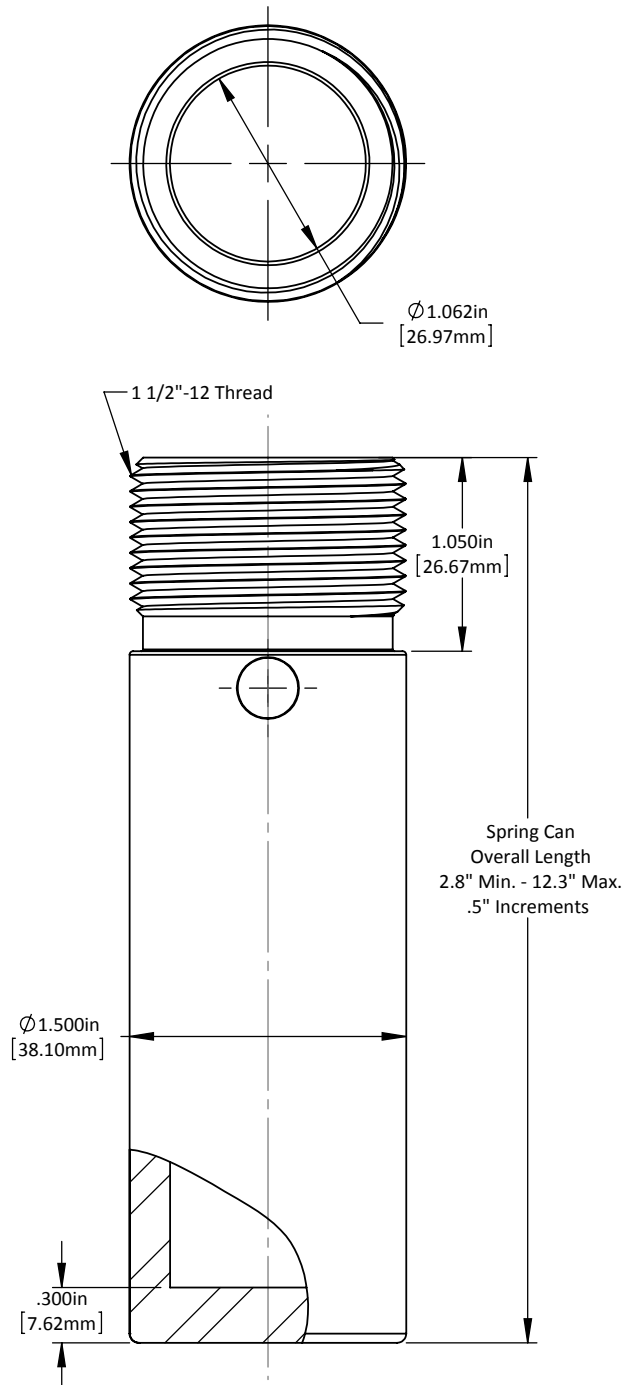
Guide Pin	Spring Can	Gas Spring
		
<ul style="list-style-type: none">• 1.25" Diameter• 2.000" - 10.875" Long• 3/8 or M10 Taps	<ul style="list-style-type: none">• 1.50" Outside Diameter• 2.80" - 12.30" Long in 1/2" Length Increments	<ul style="list-style-type: none">• 25mm Diameter• Brand of your choice• NOT Provided by SL• Part # Reference Sheet available upon request

SL19/SL25 Component Prints

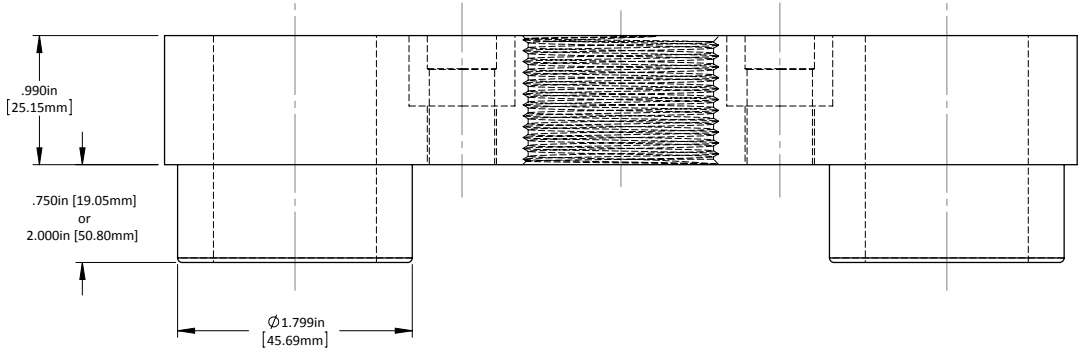
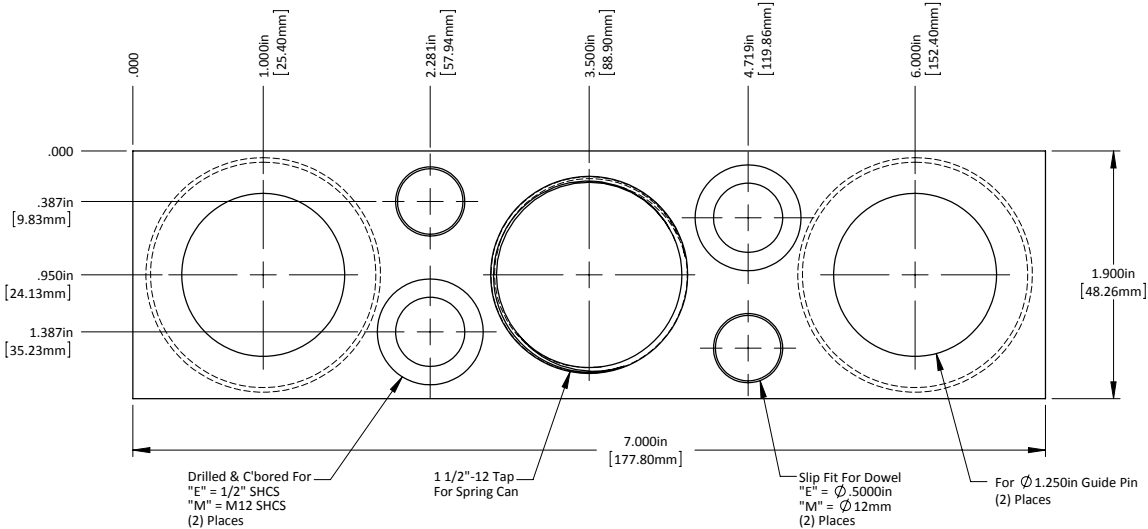
Guide Pin



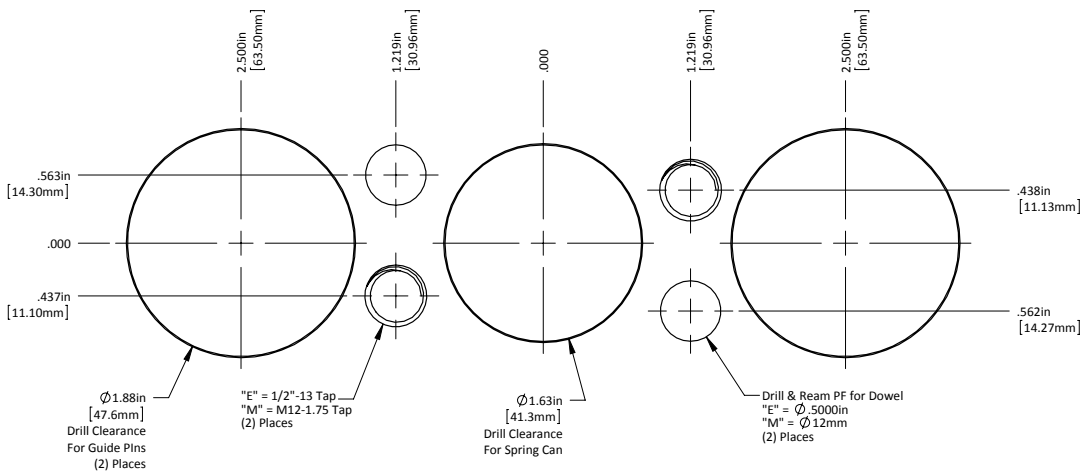
Spring Can



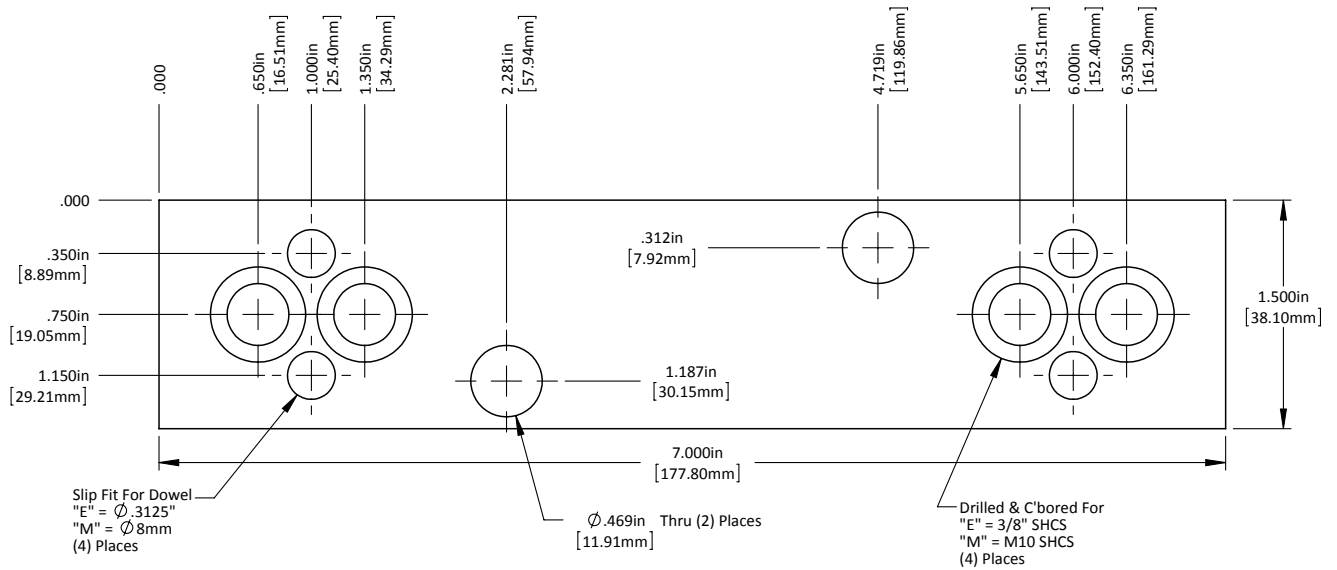
SL19 - 7.00 - Base



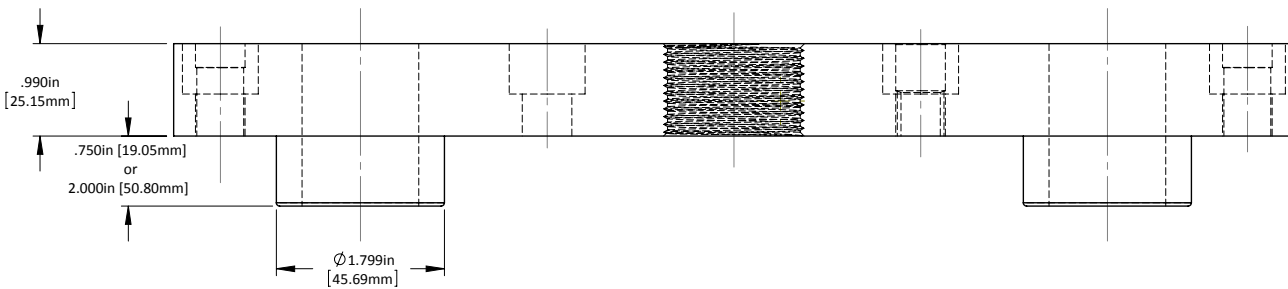
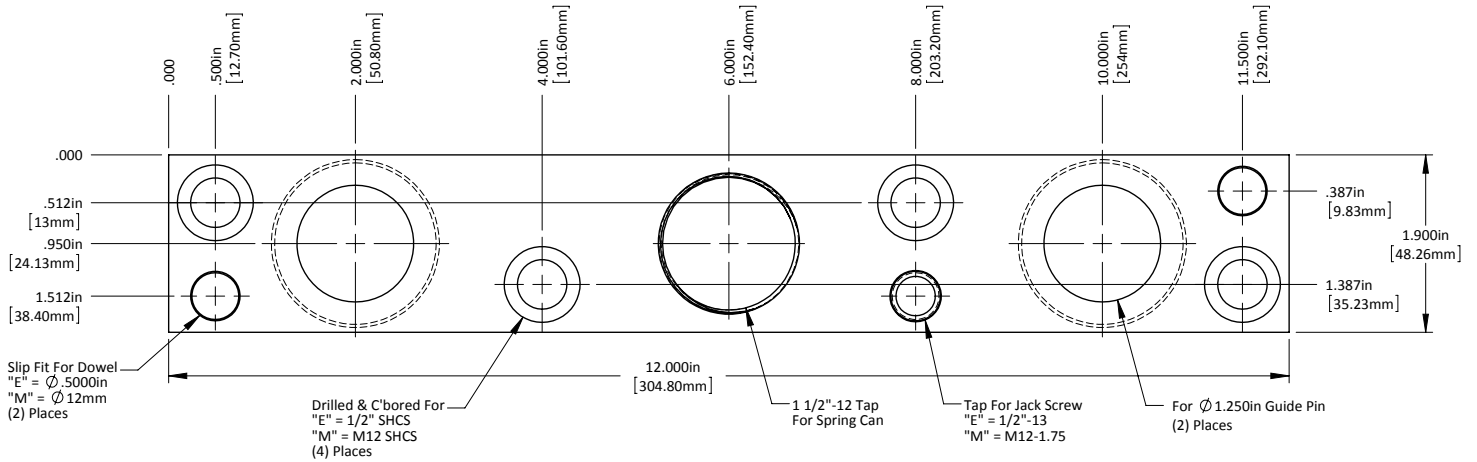
Machining



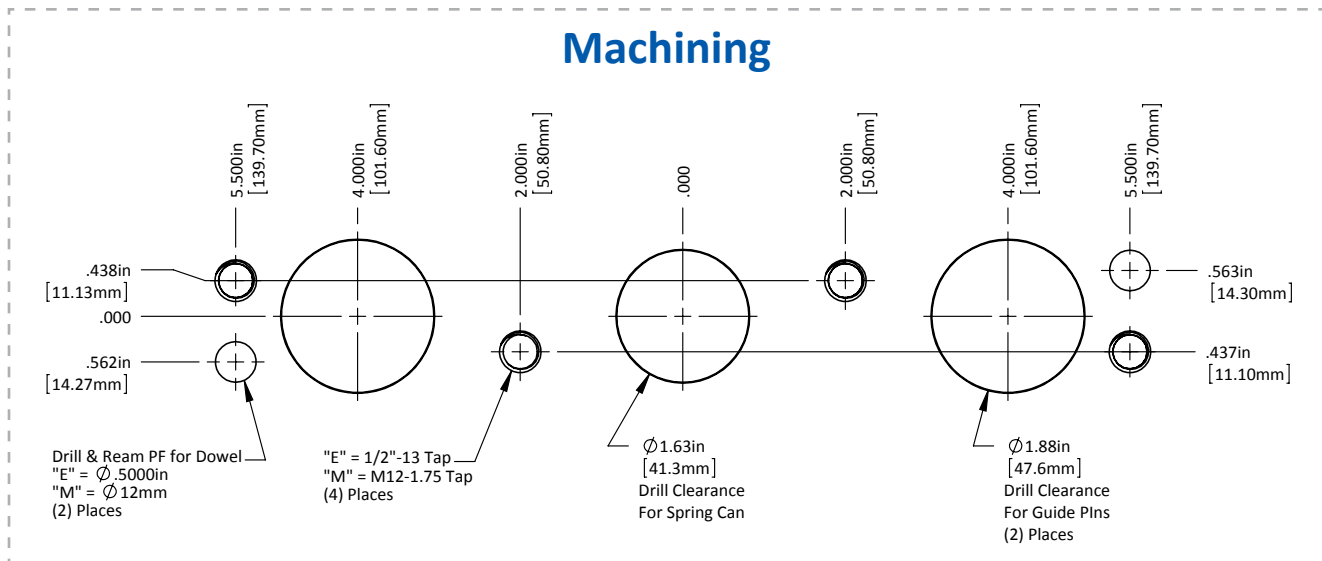
SL19 - 7.00 - A Top Plate



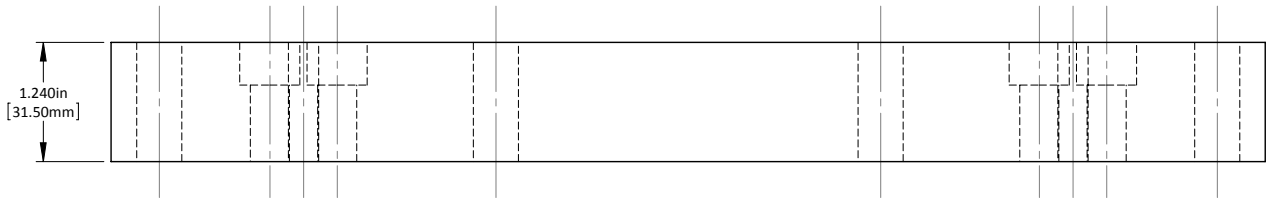
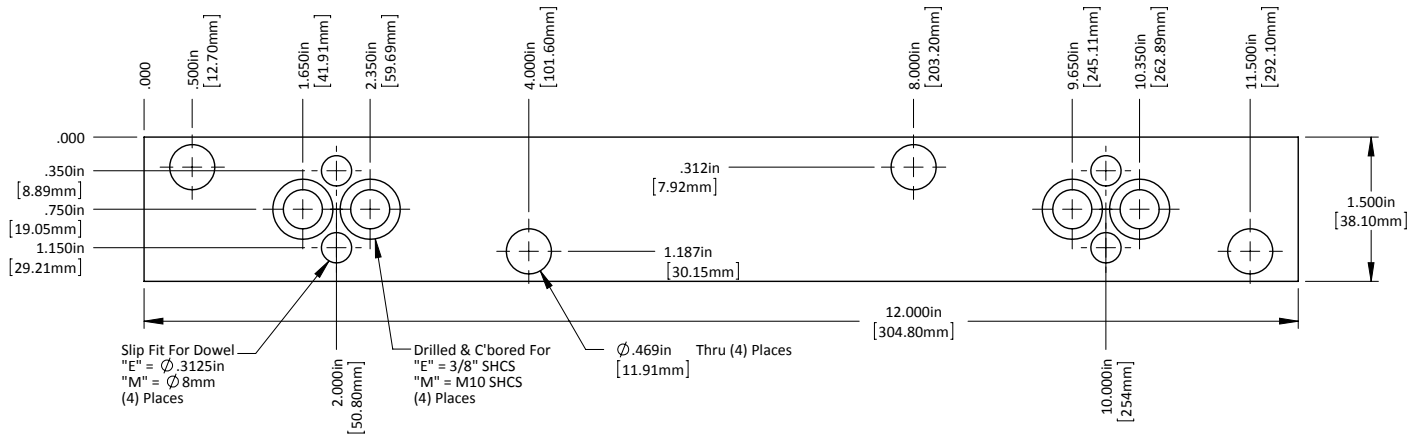
SL19 - 12.00 - Base



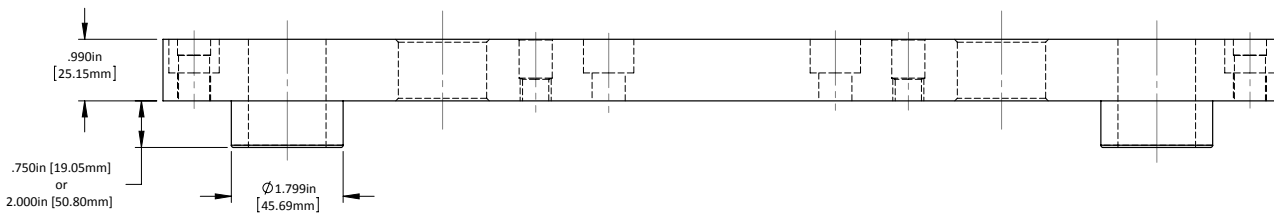
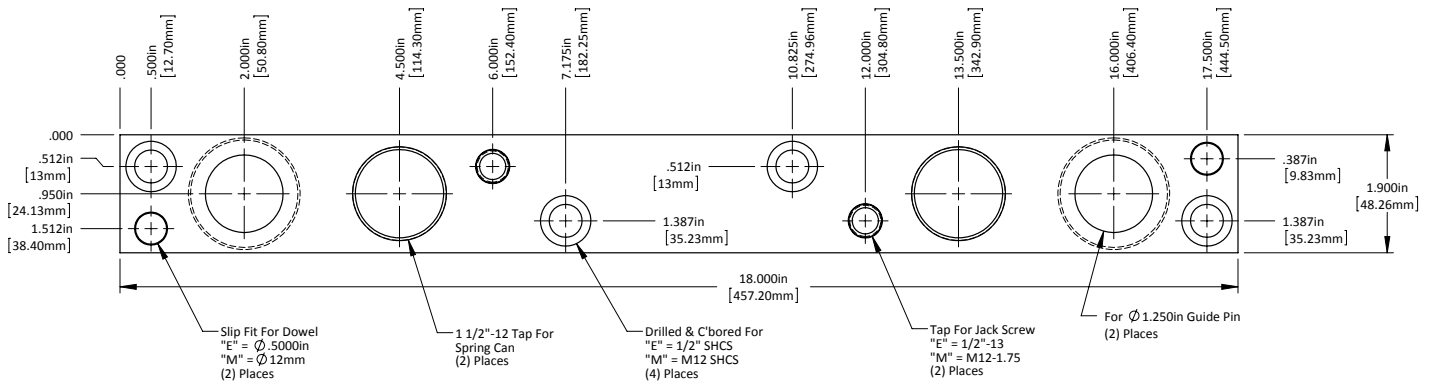
Machining



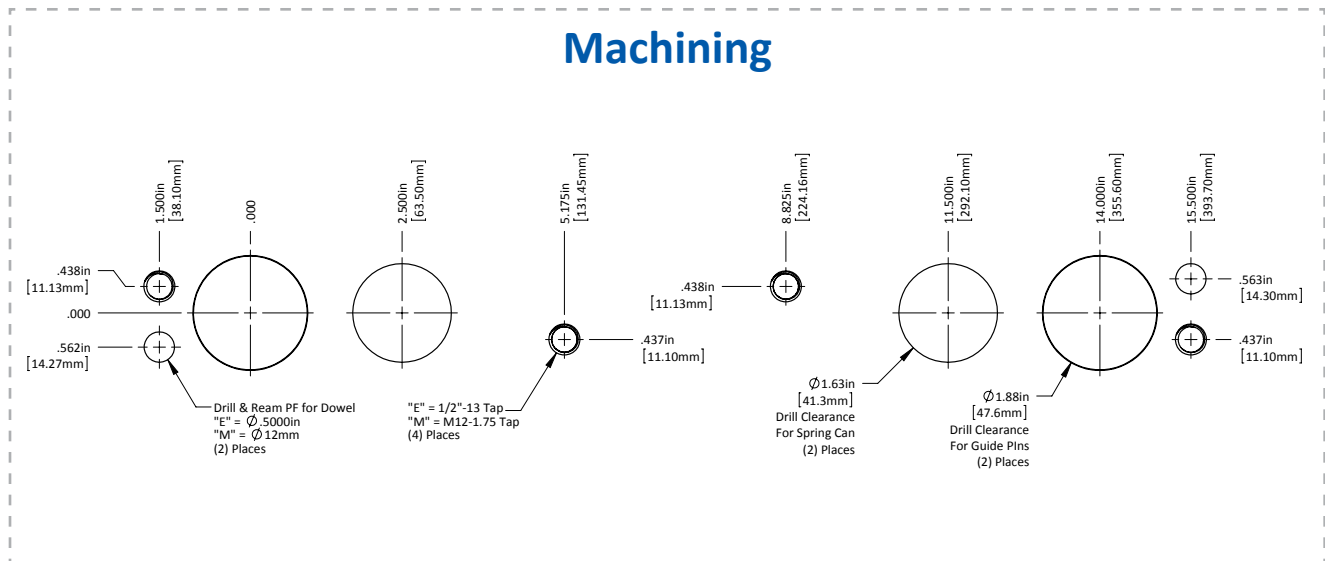
SL19 - 12.00 - A Top Plate



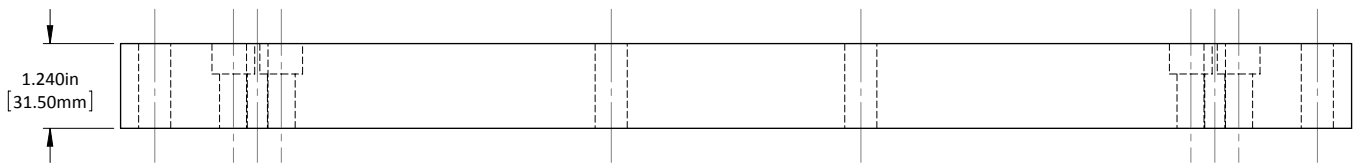
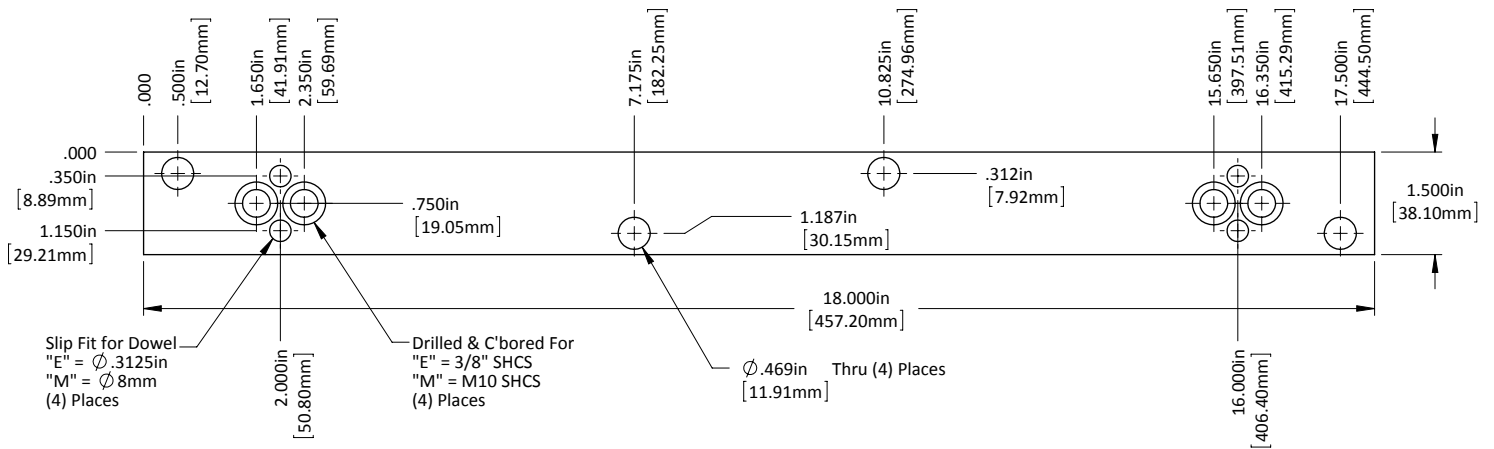
SL19 - 18.00 - Base



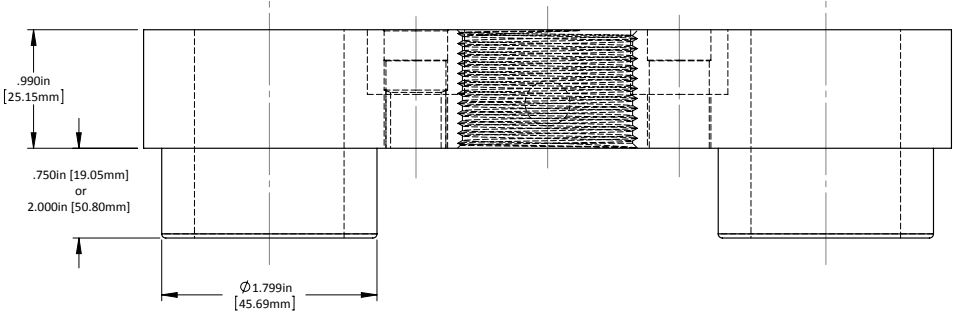
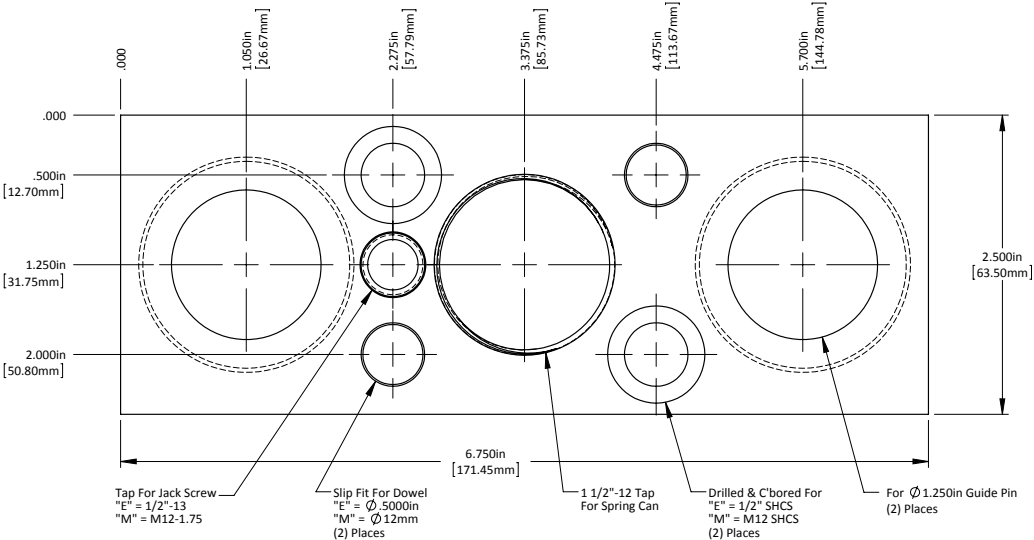
Machining



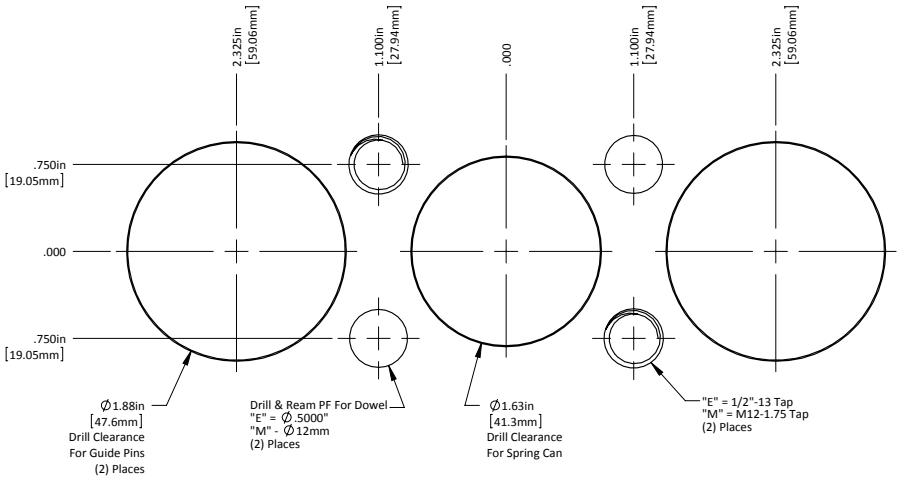
SL19 - 18.00 - A Top Plate



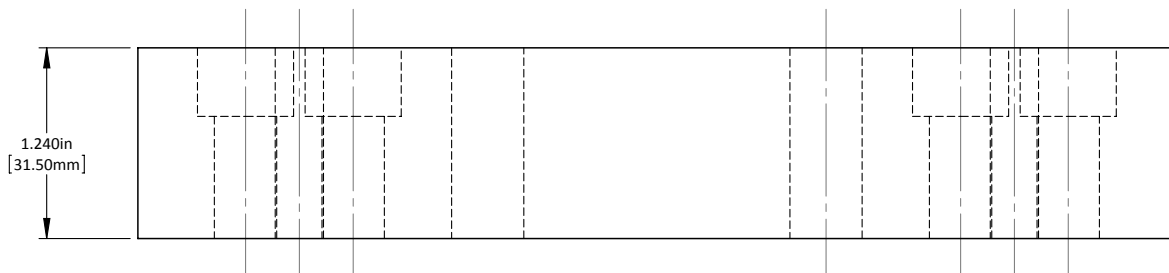
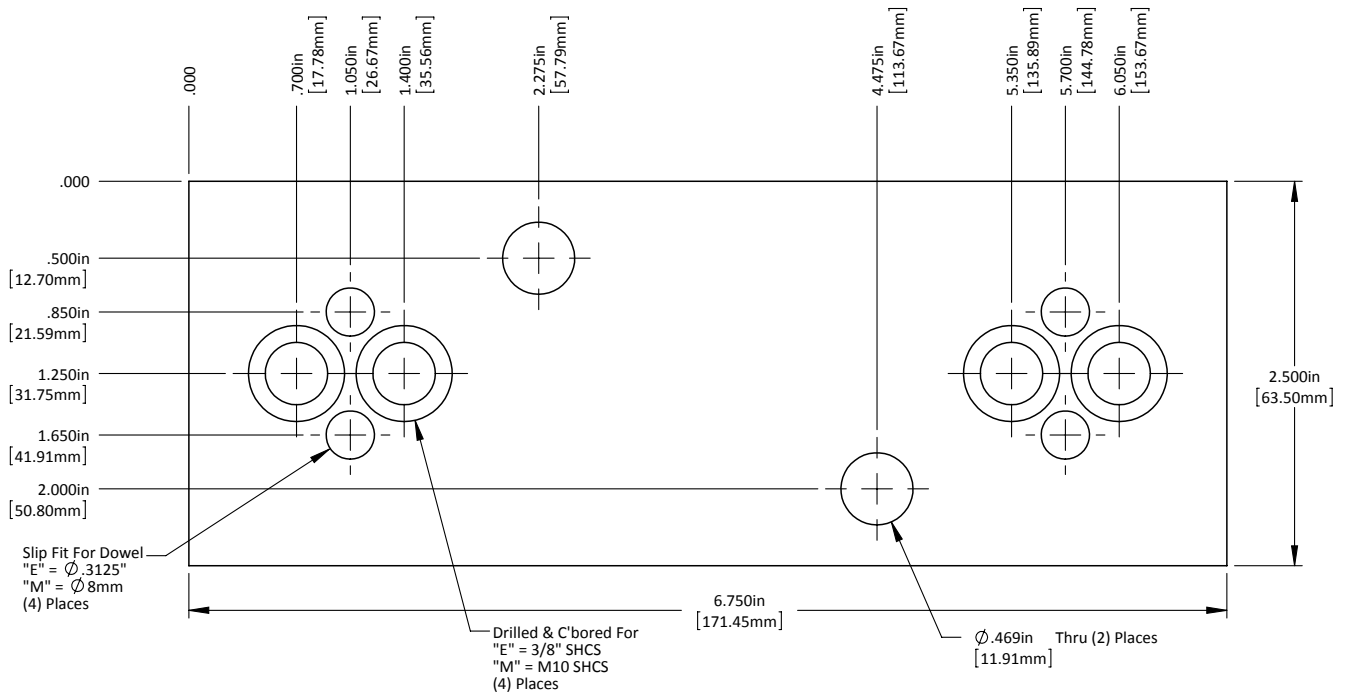
SL25 - 6.75 - Base



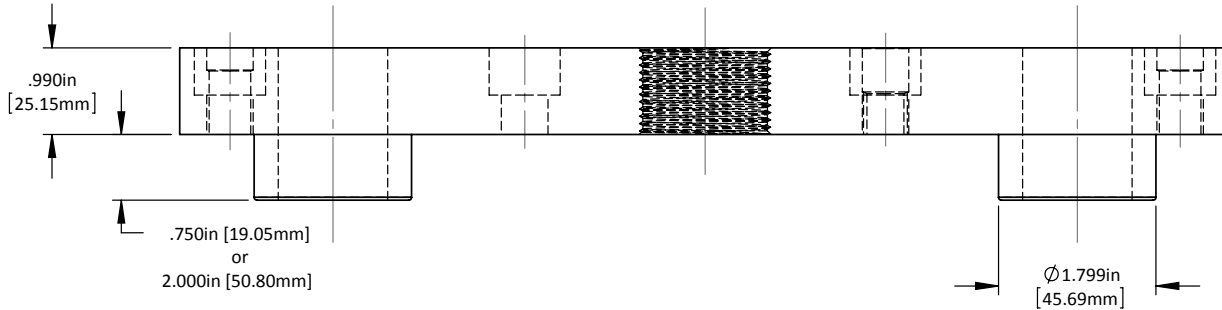
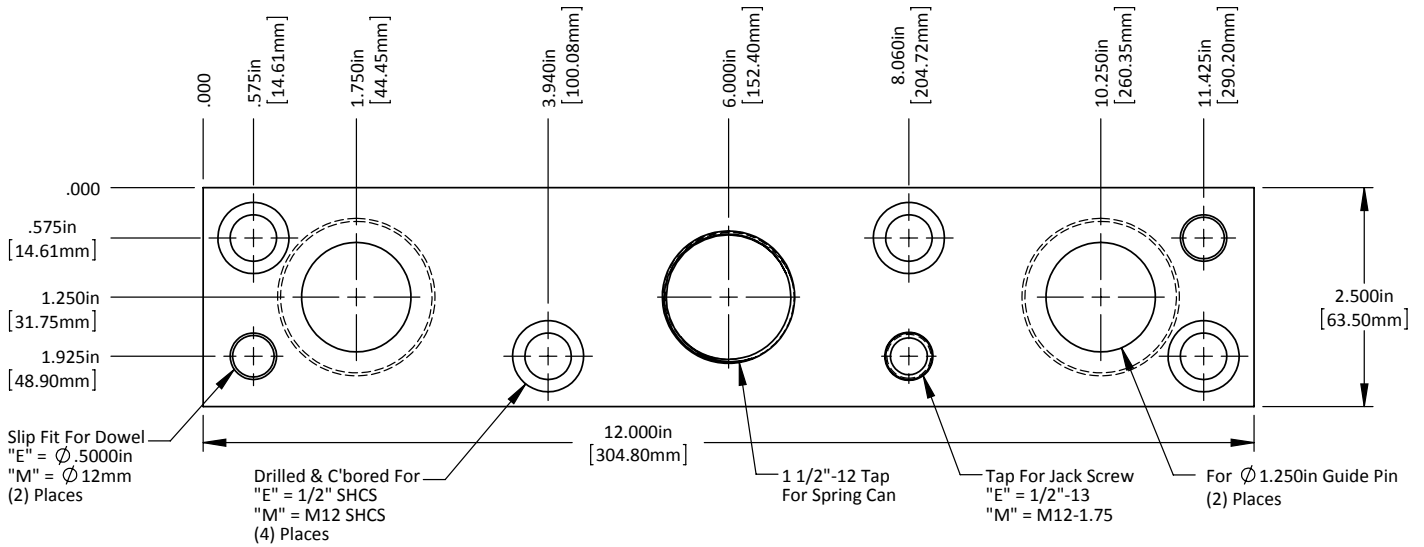
Machining



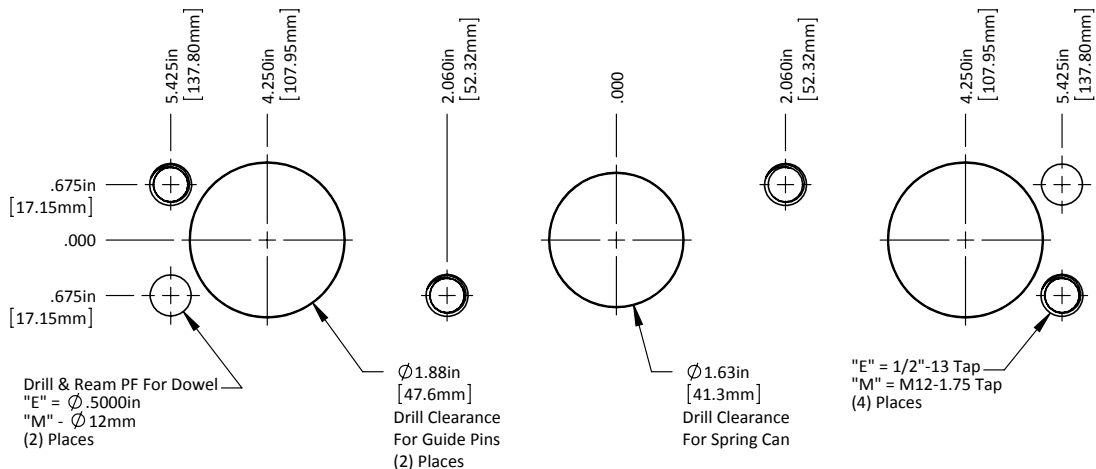
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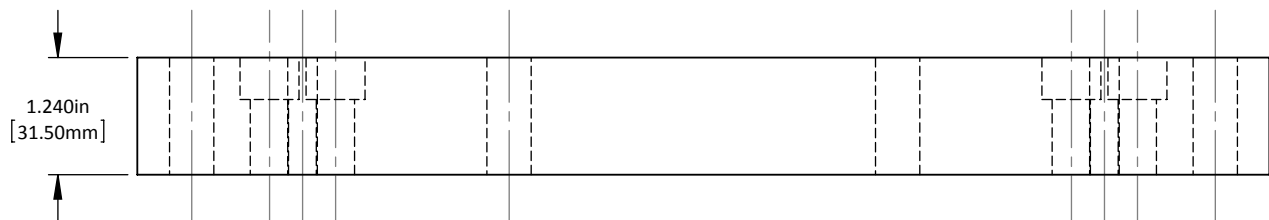
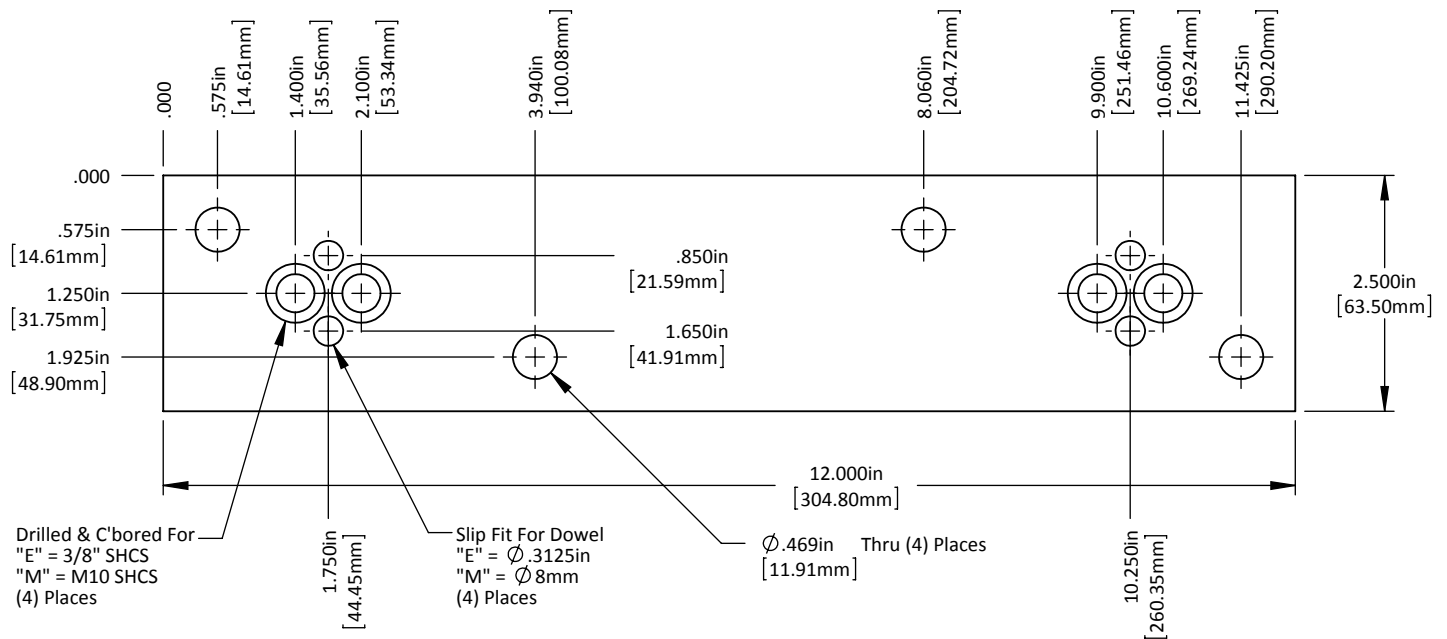
SL25 - 12.00 - Base



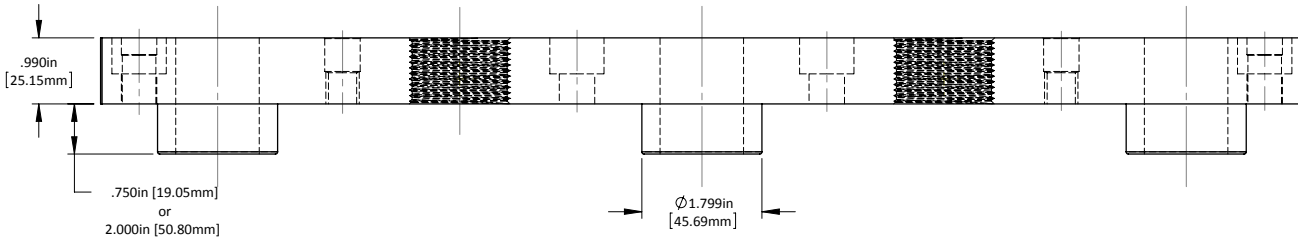
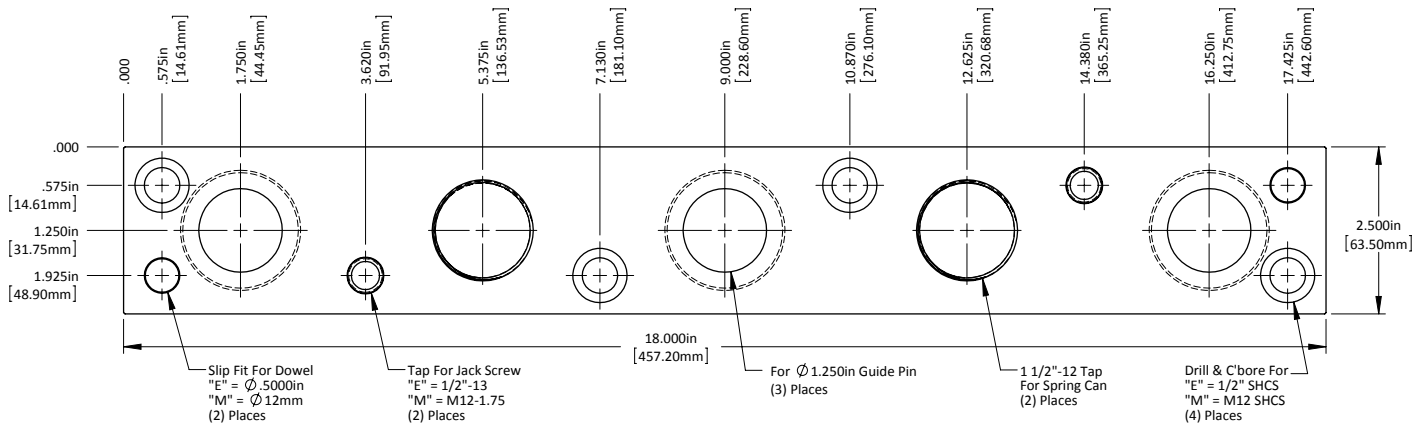
Machining



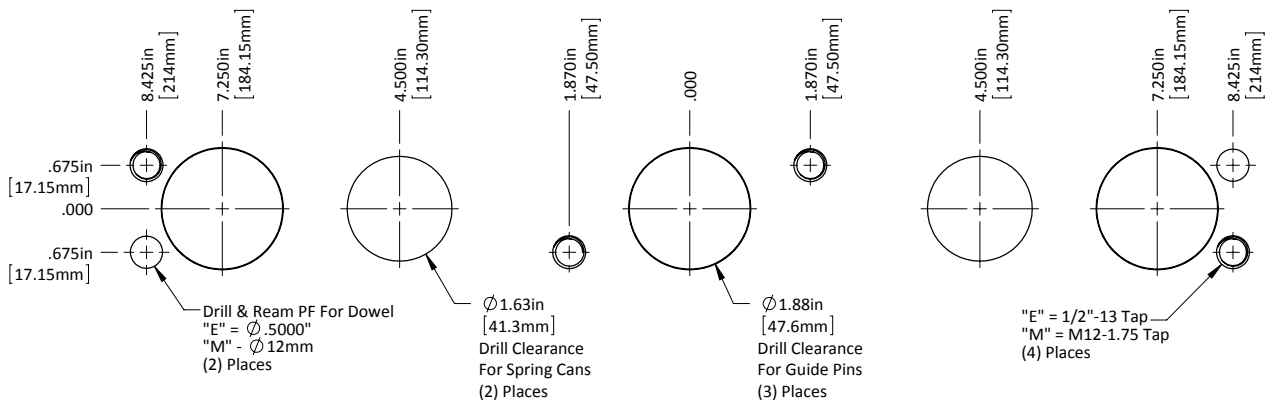
SL25 - 12.00 - A Top Plate



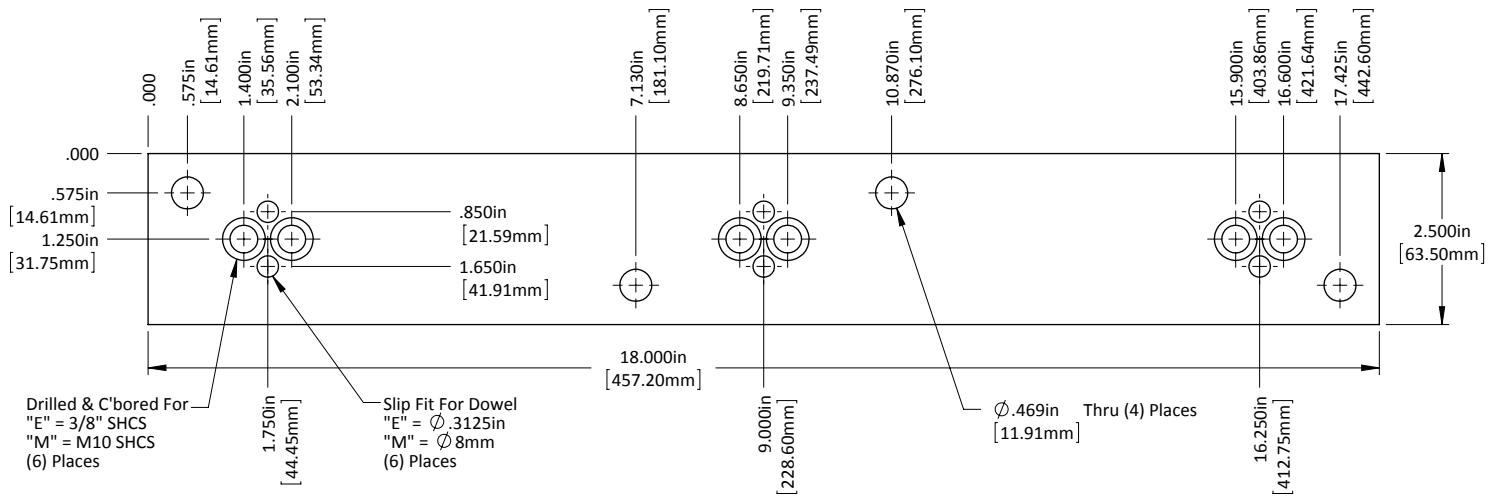
SL25 - 18.00 - Base



Machining



SL25 - 18.00 - A Top Plate



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