DPS MOLDING INC.

The higher end of molding...

let us worry about delivering your plastic components manufacturing

PROUDLY MADE IN THE USA

DPS Molding, Inc.
Manufacturing location:
276 Bailey Lane
Vanceboro NC 28586, USA
email projects@dpsmolding.com

Mailing:
PO Box 754
East Brunswick, NJ 08816, USA
tel. +1 732 254 1530
fax +1 732 254 3509

What do we do?

Materials & Technologies

We use all major thermoplastic resins including PP, PS, ABS, SAN, PC. We do specialize in the following processes:

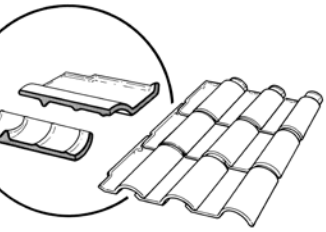
Structural Foam Molding is used to produce bulky items overcoming issues like warping, cracking, shrinkage and much of the built-in-stress found in conventionally molded thick components. The surface aesthetic associated with structural foam molding can be exploited to obtain a wood-like effect through additives, material coloring and tool engraving.

Co-injection molding is the technique of injecting two materials (usually the inner material is enriched with a chemical foaming agent) into a mold in a controlled sequence in order to produce a thick molding with a compact outer skin and an inner core of structural foam. Co-injection molding is the best way of manufacturing thermoplastic items with a section of 5 mm or more (0.2" or more), requiring a smooth impeccable surface. This particular process overcomes issues like warping, cracking, shrinkage and much of the built-in-stress found in conventionally molded thick components. Important savings can be achieved by using a quality material and coloring in the skin/outer layer while using recycled or lower grade materials in the core. Beyond the savings, brilliant technical solutions can be obtained by pairing compatible materials enhanced with different additives which leads to radically different properties in the skin and in the core while still working as one in a single component.

Co-injection molding with Gas assist is the technique of injecting two materials (usually the inner one enriched with a chemical foaming agent) into a mold and using high pressure gas to empty the core. This is one of the best ways of producing a very thick but lightweight component and the pairing of two different but compatible materials with different properties working as one. The foaming of the inner material is counterbalanced by the high pressure gas injected into the mold cavity creating a variable density wall that can be controlled by timing the gas injection (compact high density skin material on the outer visible wall, a lower density foamed 2nd material showing increasing higher density approaching the inner wall of the hollow core).

Capabilities

- Parts and components up to 10kg [22 lb]
- Platens up to 1100 mm [43"]
- Columns up to 850 mm [33 1/3"]
- Min. Mold Thickness 300 mm [11 2/3"]



What can we do for you?

If you are a Designer...

Resin can be noble. There is no need for plastic products to look cheap, you can steer away from reinforcing ribs and flimsy unattractive thin surfaces. You can integrate substance into your design.

IMAGINE advanced simple rich tick forms that you can play with. Look at the infinite possibilities of plastic as an enhancement, not as an impoverishment, while still retaining low manufacturing costs and simple tooling when implementing your idea from sketch to realization.

We could make it happen...

If you are an Engineer...

Dare to explore the combinations of different materials, enriched with different properties, but acting as one in a single component.

THINK of a roof tile with maximum UV protection in the surface and amazing insulation properties at its core. Dare to conceive in a single object an extreme impact resistant skin, with a remarkable structural rigidity at its core at affordable manufacturing costs...

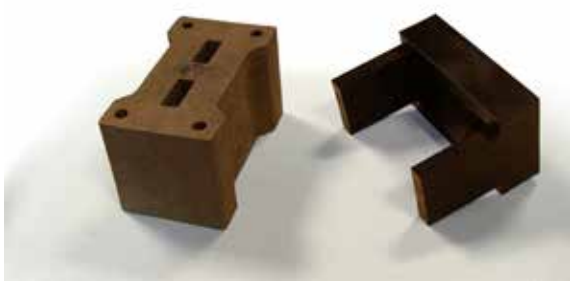
Our bread and butter...

If you are a Manufacturer...

Traditional parts can be beautified and re-designed at lower costs than in traditional injection molding.

EASE UP your tooling, there is no need to reinforce parts with ribs and incorporate expensive tricks aimed at thinning plastic components. Thanks to our low pressure processes, aluminum can be used instead of steel in the production of molds with lower capital investments. Consider the possibility of using recyclable materials inside and/or outside every single part, embrace the increased design and engineering freedom mentioned above, and we might definitely be a good partner for your new ventures...

This is precisely what we can do for you...



IMAGINE...

THINK...

EASE UP...

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PRODUCTION

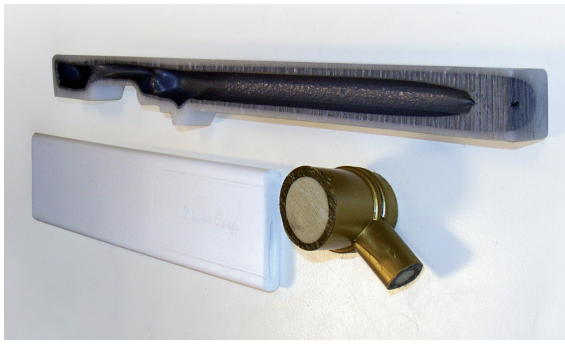
owners

DPS Molding Inc. owners are also its customers:

45% PS Furniture
5% Roger Clark (president of PS Furniture)
https://www.psfurniture.com/product/classic-event-chairs

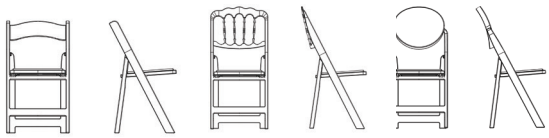
45% Drake H. & I. Corp. dba Drake Corp.
5% Diego Discacciati (president of Drake Corp.)
http://www.drakecorp.com/_FURNFoldingChairs/index.asp

current production

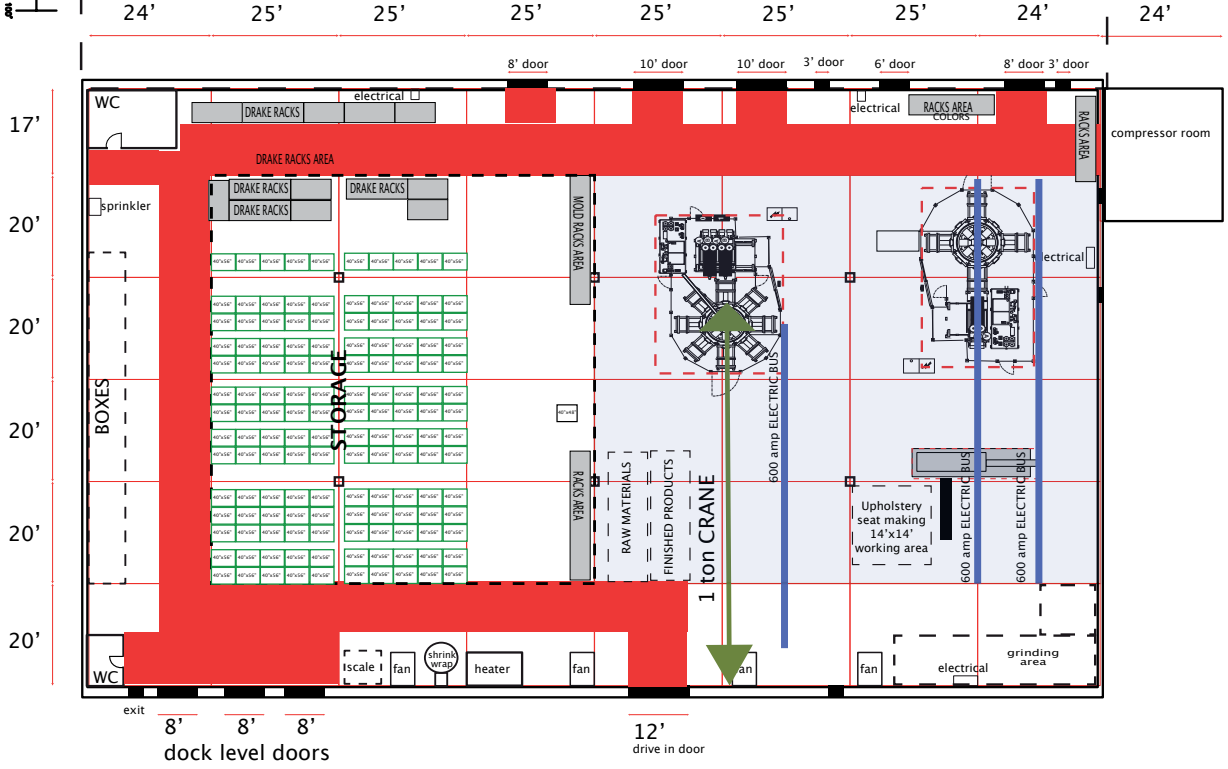


Our current production is **90% folding chairs for the foodservice, catering & special events in general with an average of 40,000 chairs/year.** On our 8 station machine we make parts for 2 complete folding chairs and a partial third model simultaneously. We use constantly a mix of co-injection with gas assist on 6 stations and regular co-injection on the 2 remaining stations.

We never tapped our full capacity as the machines we use are meant for very high volumes and we never explored other possibilities. However the nature of our current production in the middle of a pandemic, is pushing us to explore other options and sinergies. Handling special technologies however we cannot have too many choices.



ADJACENT BUILDING AVAILABLE FOR EXPANSION



MANUFACTURING

the building

DPS Molding Inc. is currently using a floor space of approx. 23,000 sqf., of which:

- 10,000 sqf for core manufacturing where all machines, assembly and packaging are located.
- 13,000 sqf for logistic/warehousing

Despite the compact manufacturing floor space occupied, DPS has processed more than 650,000 lb per year of plastic without ever reaching full capacity.

room for expansion

An additional 20,000 sqf adjacent building can be used for expansion and is currently available. Buildings were built in the 80ies with metallic frame and metal walls. The property was recently sold, it might need some upgrades, the landlord has recently resealed the roof and started some renovations.

MACHINES

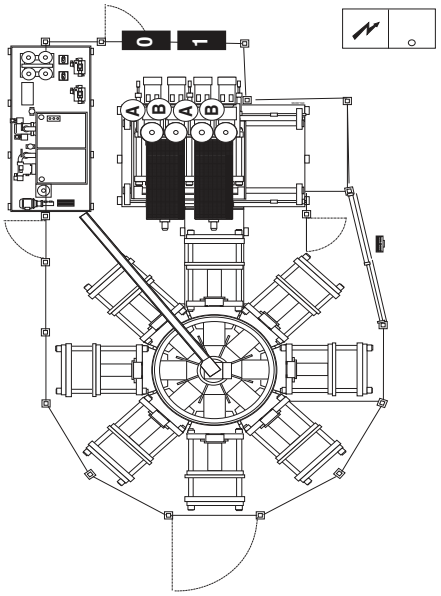
intro

DPS Molding Inc. has processed more than 650,000 lb of plastic a year. We only have one old 300 Ton HPM traditional in line injection molding machine. The bulk of our production however is made on non traditional ROTARY co-injection + gas assist molding machines, multistation. We use:

model: 8 STAZ HSSP-2-BIC

One **8 station rotary co-injection+gas assist molding machine** that despite being only a 100 ton, can can make parts up to 7 lb. on each station and is equivalent of having 8 different molding machines. We keep injecting, machine rotates, stations have the time to cool off before reaching the extraction post before the next shot. **Two co-injection groups (4 screws) allow us to inject 2 completly different material combinations/colors in the different stations (for example one station white, the following black or one PP, the following PS).**

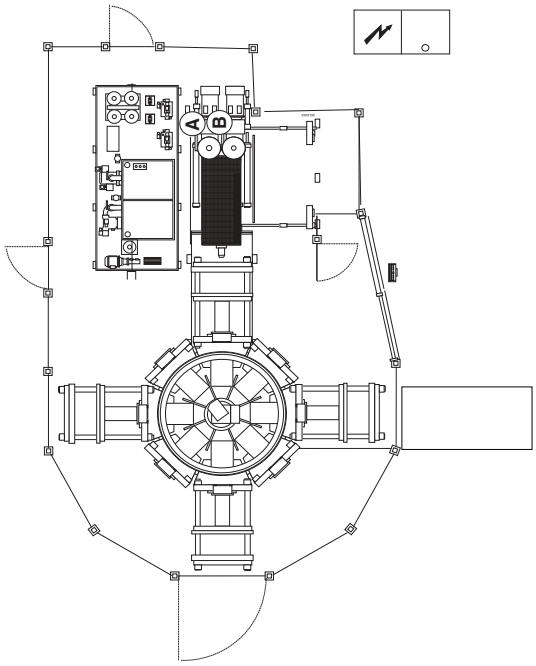
Ref. Video: *https://youtu.be/OWv1xSzW1yY*



model: 4 STAZ E 140

One **4 station rotary co-injection+gas assist molding machine** that despite being only a 140 ton can can make parts up to 23 lb. on each station and is equivalent of having 4 different molding machines.

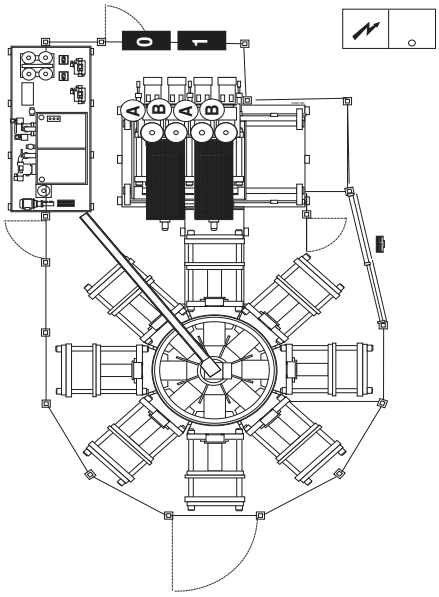
Ref. Video: *https://youtu.be/G9WnCxDVgDw*



MACHINE DETAILS

model: 8 STAZ HSSP-2-BIC

One **8 station rotary co-injection+gas assist molding machine** that despite being only a 100 ton, can make parts up to 7 lb. on each station and is equivalent of having 8 different molding machines. We keep injecting, machine rotates, stations have the time to cool off before reaching the extraction post before the next shot. **Two co-injection groups (4 screws) allow us to inject 2 completly different material combinations/colors in the different stations (for example one station white, the following black or one PP, the following PS).**



Injection Unit

number of screws:	4
screws Ø [mm]:	80
L/D ratio:	20
inj. cylinders:	4
ø of cylinders [mm]:	80
piston run [mm]:	500
volume inject. [cm3]:	A=B=2513x2
inject capacity (PS) [g]:	2211x2
max inject press. [kp/cm2]:	750
injection speed [cm3/sec]:	800
screw rotation [rpm]:	10-150

Clamping Unit

Clamp [KN]:	1000
number of stations:	8
platens HxV [mm]:	860x860
inbetween tie bars [mm]:	650x650
min. mold thickness [mm]:	300

Additional Info

max. vertical mold size [mm]:	1200
max mold weight [kg]:	1200
locating ring size [mm]:	210
sprue bushing radius:	flat
	flush with mold surface

Machine Floor Space

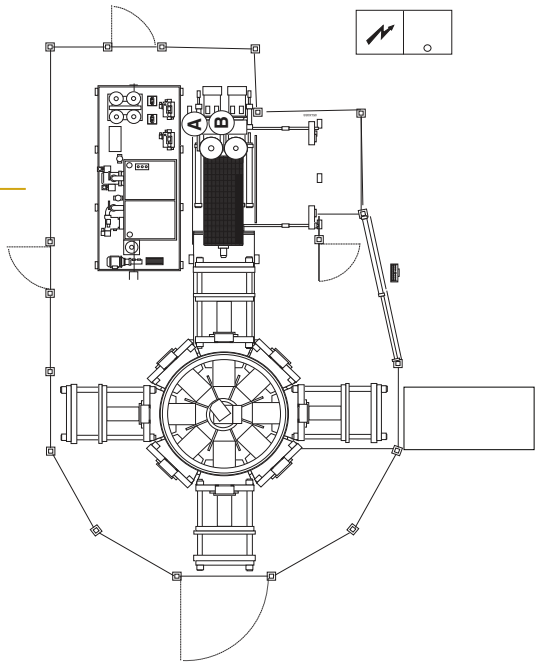
Width [mm]:	8,000
Lenght [mm]:	10,000

Two water circuits are present on the machine to have an optimal temperature control cooling system.

MACHINE DETAILS

model: 4 STAZ E 140

One **4 station rotary co-injection+gas assist molding machine** that despite being only a 140 ton can make parts up to 23 lb. on each station and is equivalent of having 4 different molding machines.



Injection Unit

number of screws:	2
screws Ø [mm]:	A=100,B=80
L/D ratio:	A=21,B=21
inj. cylinders:	2
ø of cylinders [mm]:	A=130, B=120
piston run [mm]:	500
volume inject. [cm3]:	A=6600, B=5650
inject capacity (PS) [g]:	6000+5000
max inject press. [kp/cm2]:	A=650, B=700
screw rotation [rpm]:	A=10-100, B=10-130

Clamping Unit

Clamp [KN]:	1400
number of stations:	4
platens HxV [mm]:	1100x1100
inbetween tie bars [mm]:	850x850
min. mold thickness [mm]:	350

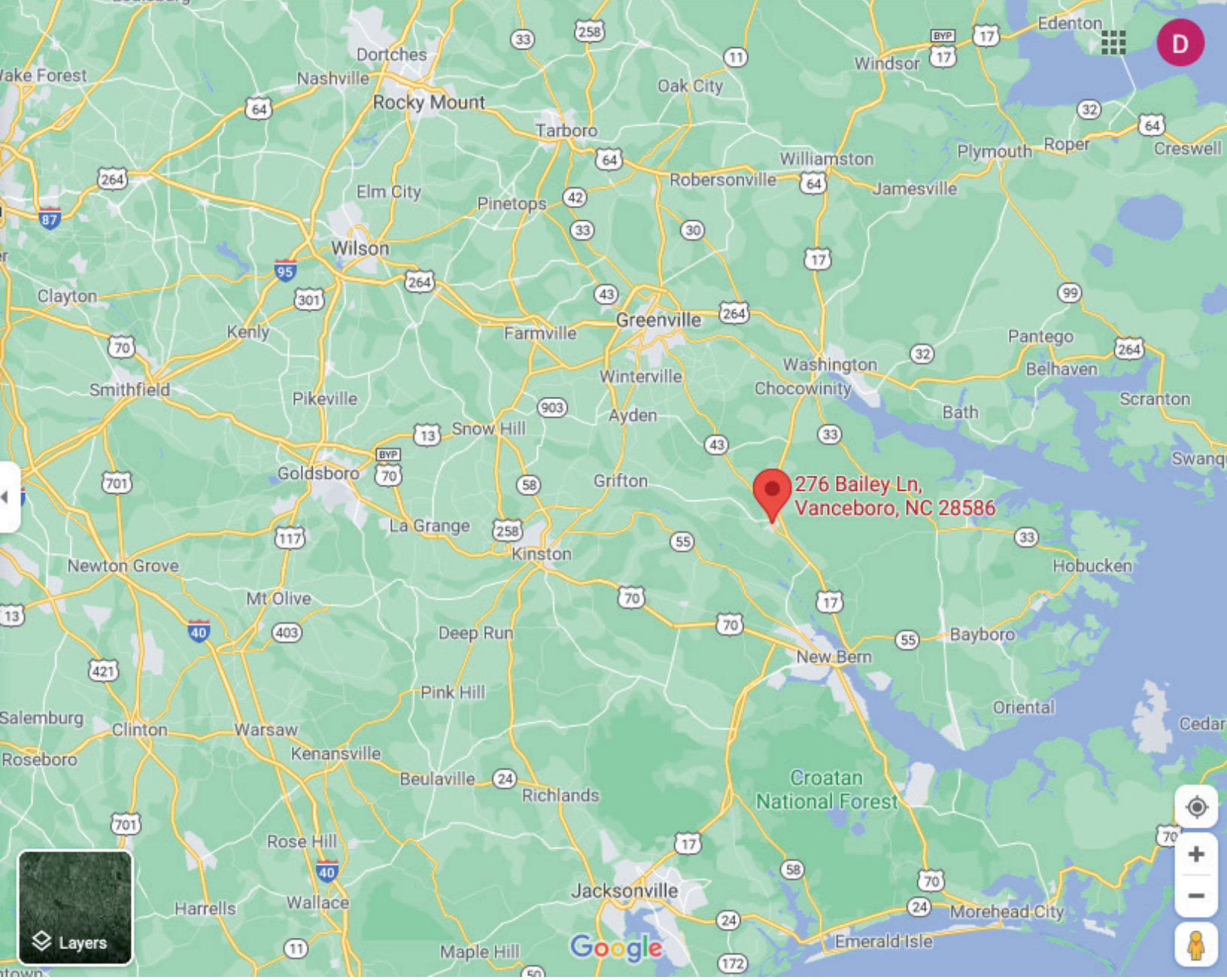
Additional Info

max. vertical mold size [mm]:	1200
max mold weight [kg]:	1500
locating ring size [mm]:	210
sprue bushing radius:	flat
	flush with mold surface

Machine Floor Space

Width [mm]:	7,000
Lenght [mm]:	11,000

One cooling water circuit is present on the machine.
To have more temperature control on more complex items cooling process, a water heating unit with a tank in a second closed circuit was added in order to be able to cool one side of the mold and warm up the other.



276 Bailey Lane
Vanceboro, NC

LOCATION

DPS Molding, Inc. is a small company conveniently located few hundred yards off Hwy 43 and Hwy 17 with easy access to:

* New Bern, NC 17 miles South (EWN regional airport)
* Greenville, NC 20 miles North (PGV regional airport)
* Raleigh, NC 110 miles North West (RDU Airport)
* Norfolk, VA 140 miles North (Seaport)

DPS Molding Inc. started manufacturing in 2007, in Greenville, NC and moved to the current location in 2013. The location was chosen as a quiet low crime area, no flood zone, with a reliable workforce.