

Art of Engineering - Jules Brinn

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Show Description

Jules Brinn, segment manager for high purity OEM sales at American Air Filter, traces an unlikely path from sports medicine student at East Carolina University to a 20-year career in air filtration. Jules and Denise talk about navigating complex Department of Energy and pharmaceutical manufacturing projects, and what it's like to be the only woman on her outside sales team. She also reflects on the broader opportunity in manufacturing including the range of roles, the pay, and the message she'd send to young people still figuring out their path: slow down, keep exploring, and enjoy your time.

Transcription

Denise:

Welcome to the Art of Engineering. This afternoon I have Jules Brinn from [American Air Filter](#) in Washington, North Carolina. Welcome, Jules.

Jules:

Thank you. Thanks for having me.

Denise:

And I'm just gonna give a little bit of background of how you and I know each other, because the connection with American Air Filter and Flanders goes back with us to 2007. When we met some people with Flanders, who eventually joined us, to create Integrated Containment Systems. But Flanders and now American Air Filter, who combined, I believe in 2016

Jules:

That's right.

Denise:

Have been cust have been a vendor for us for filters, for the downflow boosts we build and, and other things. So, Jules, tell us a little bit a, about yourself and how you got there and, and what you do for American Air Filter and the history, because they're over a hundred years old, I believe.

Jules:

Yes. well, it's kind of a crazy backstory of how I got here. I actually started ECU East Carolina University in the sports medicine program, thinking I wanted to be like an athletic trainer. So I grew up loving sports playing sports, watching 'em, you know, I thought it'd be cool to be one of those trainers who runs out on the field when somebody gets hurt and just be in the middle of the action. But after several weeks of having to wash football player towels and uniforms, I decided I wanted to do something different. So my dad, my dad was kind of my idol growing up as a kid. I mean, my mom too, but my mom, she was a nurse, and I already knew I did not have that in me, that she's got that medical skill, skillset, and she's tough as nails.

Jules:

And I, I just knew I couldn't do that. But my dad was an engineer, and I always just thought that was really cool. Like, he was just smart and you know, as a kid, you think your dad knows everything. And so I just, I thought, you know what? Let me try it. So I changed my major going into my second semester freshman year, and I stuck with it. And as far as air filtration so I had just graduated. It was 2003, as you probably remember. It was a really hard time to get a job. A real job, yeah.

Denise:

Yes.

Jules:

Yeah. It was a tough time to get a job. So I was working at JCPenney here in Greenville, North Carolina. And I got a call from the engineering manager at Flanders, CSC, which was Charcoal Service Corporation. That, that place was in Bath, North Carolina. So Flanders had acquired CSC in the late nineties, and they had merged the name at the time. So he had seen my resume online and called me up to come in for an interview. Well, my first trip down to Bath for an interview, I was a little hesitant because it was an hour drive from where I was living at the time. It was a little rundown plant with trailers for offices, no air condition in the shop. The job offer wasn't, you know, what I was my hopes and dreams were coming out of college with a four year degree. But like I said, knowing it was really hard to find a job at the time, I, I took it. I just went for it. And that's when I was first introduced to air filtration.

Denise:

So what did you get to do to begin with?

Jules:

So I started out as a project engineer doing job packs bills and materials, shop drawings, customer drawings you know, test reports, getting those ready to send out to the shop, things of that nature.

Denise:

Well then tell us about the, the journey from there.

Jules:

So from there, I, well, I stayed in engineering for I'd say 18 ish years. And then I switched over to the sales side inside sales. And just recently end of May, I'd say I went to outside sales.

Denise:

Okay. So what does that look like and how has that been experience been? Because that's for a lot of people that'd be a big move.

Jules:

Yeah. Well, it was a little intimidating at first. Moving to outside sales because, you know, your, your customer facing, and as everybody probably knows or engineers are not known for good people skills like that, so. But so I was intimidated. I was a little nervous, but it, it actually, it came pretty quick and I realized I'm more of a people person than I thought I was.

Denise:

Well, I would say that I would've been surprised that you hadn't been doing that for a long time. The first time I met you.

Jules:

Well, that's good to know.

Denise:

I do have a funny one about one of, one of the engineering firms that we work with. Jules said they're, they're careful about where they hire engineers because the ones from the really, really, really top-notch engineering schools they tend to look at their shoes. You didn't come from there.

Jules:

No, no, no, no.

Denise:

So, so now you are a segment manager for high purity, and that would be OEM, which is original equipment manufacturer, right?

Jules:

That's right.

Denise:

And what does that, who are your customers and what does, what do you do in a day?

Jules:

Well, I get a lot of emails and calls, of course. My customers are, like you said, original equipment manufacturers. A lot of times they need HEPA filters for their units that they make, that they fabricate and manufacture. They want to package our filters with their equipment to sell to their customer. So they have a customer too. So they're, they're my customer. And then there's also a, a end user.

Denise:

So that's kinda like we are, because we buy 'em to put in our downflow booths.

Jules:

Right, exactly.

Denise:

Okay. So, and what other, like, types of equipment, because is that mostly life sciences or does that kind of go across the board?

Jules:

Yeah, well, there's a lot. I see a lot of pharmaceuticals. I see a lot of ev, battery, microelectronics, biosafety. I mean, it's kind of all over the place,

Denise:

But it's where good filtration is required.

Jules:

Right, right.

Denise:

So what's one of, I wouldn't say challenging, but maybe interesting projects that you've worked on?

Jules:

Well, two kind of pop out in my mind. One of 'em was from very early on in my engineering career, maybe a couple years in. So if you think back, I'm at this time probably 23 ish, 24 maybe. So still a little bit intimidated, you know I got a huge Department of Energy job dropped in my lap. And the complexity of those jobs I felt like was far beyond my experience. At the time, you know, you have a ton of specifications. You could have like 2000 pages worth of specifications to read through and understand. And then a lot of QA, one quality assurance paperwork that you don't have on a normal, you know, lower level job. Yeah. On material, material traceability special testing. And this job required weld maps. Now, all this stuff that I'm mentioning now is easier to do. Back then it was most mostly manual. You know, we didn't have the technology 20 years ago that we do now. But it was, it was quite overwhelming. And I, now, I

did have to ask a ton of questions. And the funny thing is, I've been told before that I asked too many questions, and I always thought that wasn't such a thing.

Denise:

I don't think it's ever such a thing.

Jules:

But it helped me. I got through it, I learned a lot, I learned more than I, I knew there was to learn, and I probably also realized how much more I had to learn.

Denise:

Yes. I, I think asking for help is just one of the best things we can learn.

Jules:

Oh, yeah.

Denise:

From the beginning,

Jules:

Right. That's how you learn asking questions.

Denise:

Yes. So I would, I, you know, I'm just guessing, Jules, but your background on the technical side has to be of a great benefit for you and what you're doing today.

Jules:

Absolutely. Now you can, I feel like it's easier for, well, for me, in my situation, it's, it was easier for me to transition to customer facing and outside being confident that I knew knew what I was talking about or what a customer needs. I don't, I didn't, you know, you don't wanna do that if you don't know what you're talking about, because the customer's gonna ask you a lot of questions. And if, you know, if you can't answer at least some of them <laugh>, I mean, it's okay to say, you know, I'll get back to you on that. But if, if you can at least answer some of them and sound like you know what you're talking about, you get a lot further.

Denise:

Yes. Yes. So have you had any, even in the beginning because I can, I can't imagine that back when you started as an engineer, that there were very, were there any women? What are where you started?

Jules:

There was actually one. But she was not there very long after I started. I don't think she had been there very long and wasn't there very long after I started. But other than her, no, just me.

Denise:

You, you, you paved your own path.

Jules:

Yeah. That's right.

Denise:

So air filtration itself, what have you seen in the changes in the 20 years about where they're used, how they're used, why they're used?

Jules:

Well start now in engineering, I was mostly just doing containment. So my mind was focused on like government stuff and, you know, biocon containment bi biosafety labs and things like that. But when I went into sales and started doing more with like fan filter units and terminal hoods, I realized it was a lot broader. There's so many applications and so much different equipment. There's HVAC, you know, there's, and I didn't even know anything about HVAC until I went to sales because I was focused on the containment side of it. So I, I had to learn, and you know, how at a a f we like to call everything an astro something, so I had to kind of learn all the, the nomenclature that I didn't have in engineering.

Denise:

Okay. So what's the difference between filtration that's used in HVAC and the containment side?

Jules:

The main difference is the efficiency of the filters. So in HVAC, your final filter is typically a more medium efficient filter. Such as like a Merv 14 or 15 rated filter around 95% efficient. When you get into the containment systems they're HEPA rated, so they're 99.97% efficient, efficient and, you know, goes up from there.

Denise:

Okay. So the HVAC would be kind of like what we would have in our own heating system at home or in offices,

Jules:

Right. You probably have pleated filters in your home and office systems.

Denise:

Yes.

Jules:

Those are probably anywhere from Merv eight to maybe Merv 13, somewhere in that range,

Denise:

Because if you get any higher than that, it's hard to get air through them. Right. Yeah.

Jules:

Yeah. You have to be able to get air through. Yeah.

Denise:

So what's the, so then if they're very high rated, what do you have to have on the back side to get the air to move through?

Jules:

Well, a lot of times there's an existing fan that's already set up or a blower.

Denise:

Okay. Okay. Yeah. So we have fans in our DOWNFLOW booth.

Jules:

Right.

Denise:

Depending on which way we want the air to move, depending on what the process is in that booth.

Jules:

Right. You could have a supply or an exhaust, just depending.

Denise:

So you mentioned two challenging projects. What was, what was the other one?

Jules:

So the other one was more recent. And on the sales side of things it, it's a big pharmaceutical job. A new plant, a new pharmaceutical manufacturing plant opening up. And it was just a massive amount of blueprints or mechanical drawings to look through and schedules and having to talk to contractors and engineers and end users to determine, you know, exactly what equipment we needed to quote, what options were needed, what types of filters were needed. So we went through several rounds of quoting and submittals and revisions before we ultimately got the job. And now that it's in-house, it's still a lot to keep up with, you know, going through the

shop because this one, it's not gonna be like, well, here's your order, make it and ship it. It's in sections, big sections.

Denise:

So those are more custom would be custom design?

Jules:

Yeah. Well, a lot of them are the like the low wall return units, and there's a lot of what we call astro cleans, which are like your LaMi laminar flow modules in the ceiling. Fan filterer units, terminal hoods. I mean, it's, it's the whole, whole building pretty much.

Denise:

Wow. Now you are in Washington, North Carolina where those filters are actually made.

Jules:

That's right. Well, we have two plants that make high purity hepa. One is in Washington, North Carolina, and the other one is in Columbia, Missouri near you.

Denise:

That's just up the road from me.

Jules:

Yeah!

Denise:

I did not know that. Yeah. So tell me what a day in the life of Jules looks like.

Jules:

Sure. Well, it's a, I'll tell you this, it's not as cookie cutter as it was before I went outside <laugh>. One day I might be at my computer all day answering emails and calls and helping inside sales with cost sheets and quotes. The next day I might be halfway across the country visiting a customer. So it's it's not boring for sure. It, it's, there's a lot. I'm seeing a lot of things that I never knew I'd get to see and going a lot of places I never knew I'd get to go. And at first I was a little nervous about the traveling, but that's another thing that I actually like a lot more than I knew I did.

Denise:

So if you are getting calls, what kind of questions do you get?

Jules:

Well, a lot of my calls are my, my usual OEM customers wanting usually HEPA filters, mega sales. They want them quickly. So a lot of my time is spent between customers and plants, seeing how fast we can get something done and shipped.

Denise:

Aha. Good. So it's, it is maintaining those relationships and, and be, be, you're essentially on the front lines

Jules:

Yes. Boots on the ground

Denise:

Yes, yes, yes. So if you had any, any experiences coming into a project as a woman and, and being asked, I know people are probably more diplomatic than they used to be about that,

Denise:

But maybe an, a project where you could, you very quickly turned it around because you know what you're talking about.

Jules:

Yeah. That actually happens quite often. There's a lot of times I get requests that I know exactly what it is, and I can go to my my OEM customer service and just say, Hey, I know what they, they'll send in an email to them and copy me to customer service, and I can say, Hey, here's your part number, this is what you need, you know, and gets them rolling right out the gate.

Denise:

I've been in the, in the industry a lot longer than you. But it still seems like we are, we are banging against the ceiling from time to time. And yet it's kind of rewarding when you can simply answer it and get acknowledgement and respect from, from the experience and the knowledge that you have

Jules:

For sure. And I do, I do get a lot of people saying, you know, we really appreciate your help and appreciate you getting back to us so fast. And that's one thing, and I don't, I don't know if it's partly a woman thinks is I'm actually the only female on the for market outside team also right now. So I just really quick to respond. I'm very responsive. I will say that even I know customers like to be at least acknowledged if you, if you get an email and you're busy, you can, you know, you can at least respond and say, Hey, I've got your email, I'm looking into it. I'll get back to you, sort of thing. And that keeps 'em, you know, that's the relationship part of it.

Denise:

Yes. So one of the things, Jules, that we've, that, that I've tried to introduce with these podcasts is all the opportunities that are available to young people, be it male or female in the manufacturing sector. Because I read something the other day, and I, and I don't have the exact numbers, but the, the salaries that are available in manufacturing these days far outweigh most of the service or retail or other opportunities out there. So how can we as as, as people who are, who have experience in manufacturing, how can we get this exposed to young people?

Jules:

Well, you know, you're right. It, it's a good, you know, it's a good paying career. And it's kind of, I kind of look at it like, if you're gonna be a, a doctor or a lawyer or an engineer, it's really good to at least try to shadow somebody in the field and see it firsthand because it is a commitment once you, once you start in like college or in the courses or, you know, it's, it's pretty specific. It's not like a general college thing. So maybe if you could like shadow somebody or even get like an internship you know, just to get some hands-on experience or at least see it firsthand. And then, and you know, here's the other thing. If sometimes you go down a path that you think you wanna be on and you don't realize that's not your path until you're halfway down it Yes.

Jules:

And, and that's okay. You know, like I don't, I feel like young people are under so much pressure these days to be adults, and they're not yet, they're still learning. They're still growing. You know, it's okay to change your mind. Don't, don't just quit. Just keep exploring until you find what you like. And you know, I, I had this conversation with my oldest son just the other day, be excited about graduating. He, I think he is more stressed out about what he's gonna do after he graduates than he is excited about graduating. And I, I hate that I said, look, just relax. I mean, you're getting ready to have a four year degree. That's awesome. You've got, wow, he's 21 years old. You know, you guys are young, you've got time. Just take your time, find what you like and it'll work out. And it is like, I tell him all the time, there's plenty of time for adulting and stressing. You don't have to do that right now. I said, just take your time, pray about it. It'll all work out. Just take a deep breath.

Denise:

Well, and you know, the thing that I think people don't think about when you, when we talk about manufacturing, is just how many opportunities there are within that spectrum. Oh, yeah. I mean, it's, it's, it's sales, it's engineering, it's purchasing, it's marketing. It's, it's, it's the, it, you know, in our facility it's fabricating and, and shipping. And so all of those things. So if one of 'em doesn't fit, maybe another one will. We've had people move all over the building. Right,

Jules:

Exactly.

Denise:

You and you yourself did.

Jules:

That's right. Yep. And, you know, you get, you learn experience no matter what area you're in. So it's, it's good to be able to get experience in all different areas of your industry.

Denise:

Yes.

Jules:

Makes you more valuable, you know?

Denise:

Yes, yes. Well, and I always think it's, you and I met at the ISPE annual meeting, and that's International Society of Pharmaceutical Engineers. But it's been really encouraging to me over 20 years, Jules, to see a, the number of women have increased dramatically over that 20 years. But, and we're seeing young people come in, which I think is also encouraging. Yes. So you mentioned family and you've now gone from being in one place to traveling. So how has that journey been?

Jules:

It's been a lot smoother than you would think. I mean, well, 21-year-old is, he is on, you know, he is on his own pretty much. He's, he's good. He can take care of himself. And then we have a 9-year-old who is in fourth grade and does all kinds of exciting things like Lego Club stuff we didn't have when we were kids. I, I'm gonna be in Lego Club now. That sounds fun. But with, you know, my husband and my, my mom and then, you know, his mom, and we've, we've got help. So it's, and it's just worked out so far. I haven't, I feel like it's meant to be, 'cause I haven't had any issues.

Denise:

Good, good, good. Well, you had mentioned when we scheduled this, that you needed to go pick your youngest one up this afternoon. And, and I, and it's great that we work for companies that that allow for that kind of help and living where you grew up.

Jules:

Yeah, I'm, I'm close. I grew up in Raleigh, North Carolina, and then came out to Greenville for college, and now I'm, you know, 30 minutes from Greenville. So I've been here a long time.

Denise:

Well, a day in the life of Jules. What brings you joy?

Jules:

Well, we were just talking about some of that. In general in life. It's my family quality time with my family. I love spending time with my husband and my boys. And my parents are local. We do

a lot with them. My husband's parents are local, so we get to see our family a lot. And it's, it's a lot of fun. And my son and his girlfriend, we see them a lot. They have a, they have a dog, and it's just, it's like a big happy family. And that's, that's what brings me joy, just spending time with them. We don't even have to go anywhere or do anything as long as they're around, you know.

Denise:

Well, and you, and if you get to play with the Legos,

Jules:

Lego Yes. Right. Yeah. Legos and, and he's got some really cool video games.

Denise:

Okay. Well, Jules, thank you so much for joining me today. It's just always so interesting to learn about the different industries within our industry and all the parts and pieces that come together that create those great production facilities for, regardless of what we're making. Thank you again for enlightening us in the world of filtration. Yes,

Jules:

Ma'am. I, I appreciate you having me.

Denise:

Thank you for joining us again on the Art of Engineering. I'd love it if you would share this episode with others in our industry and encourage them to subscribe wherever they get podcasts. In the meantime, we'd appreciate your five star review and would love to hear any comments or suggestions. Until next time, I'm Denise McIntosh from Custom Powder Systems online@custompowder.com.

Quotes

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