Q&A

with Jimmy Pan,
Chief Technology Officer of Jota Machinery

Ideas become machines.
Machines become trust.

Introduction

As Chief Technology Officer (CTO) of Jota Machinery, Jimmy Pan is more than a leader—he is the mind behind the mechanisms. With a sharp focus on original design, deep material understanding, and rigorous field testing, Jimmy has transformed how Jota machines are conceived, built, and improved. His patented technologies have redefined performance standards across the slitting and rewinding industry.

01 What drives your engineering philosophy?

My belief is simple: a machine must serve reliably under pressure—technical, environmental, and time-based. I don't believe in adding complexity for the sake of innovation. I believe in clean solutions that solve real problems, whether it's material deviation at high speeds or structural warping over long runs. Engineering, to me, is not about making things "new"—it's about making things better.

02 What is your approach to leading Jota's R&D and engineering direction?

Leadership in engineering starts with asking the right questions: What do our customers struggle with? What process can we simplify? Where is performance falling short? I then guide our R&D team to pursue answers that are rooted in physics, materials science, and application testing—not just aesthetics. We never chase trends; we solve core problems. Innovation, for me, must always be grounded in use.

03 How do your patented designs shape Jota’s product competitiveness?

Many of our machines use core technologies I personally designed—from automatic tension regulation to thermal-shaft cooling systems and servo-driven slitter assemblies. These aren’t cosmetic upgrades. They allow higher speeds, fewer defects, and longer uptime. More importantly, they reflect our independence—we don’t rely on off-the-shelf components. We build our own logic. That’s what makes us different.

04 What’s your process for turning a machine issue into a patentable innovation?

Everything begins with failure. A machine overheats. A shaft vibrates. A roll deforms. I start by studying the failure—not fixing the symptom. Then I isolate the forces, run simulations, and draft mechanical solutions that are simple, scalable, and measurable. Only when a concept survives internal testing and solves a broad application do I patent it. For me, patents are not trophies—they’re working tools.

05 What values do you instill in your engineering team?

Three things: First, never design what you haven’t tested. Second, don’t solve for one case—solve for the 100 that follow. Third, respect time: the customer’s time, the operator’s time, and your own. A well-designed mechanism saves time in setup, maintenance, and troubleshooting. That’s how engineering becomes a service, not just a structure.

06 How do you view the relationship between engineering and the customer experience?

They’re inseparable. When a customer uses our machine, they’re interacting with our engineering decisions—every button, every tension correction, every cut. If we design poorly, they suffer. If we design intelligently, they gain speed, safety, and confidence. That’s why I insist that our R&D team think beyond performance specs—they must think from the operator’s point of view.

07 Do you believe engineering is more science or more craft?

It’s both. The science gives us equations, materials, and systems—but craft gives us judgment. Anyone can calculate tension curves. But knowing when to allow ±0.3mm and when to redesign the whole layout—that’s craft. That takes years. And that’s why I stay involved in every machine I design—because feel still matters.

08 What does engineering excellence mean to you personally?

It means never settling for “good enough.” It means treating each machine like it will be tested under your own name. And it means knowing that what you build will impact someone’s business. That’s a responsibility, not just a task. I don’t just want our machines to work. I want them to earn respect in the field, year after year.

What we build together, moves the world forward.

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