

TECHNICAL SPECIFICATIONS

Alpha series	
TAKE-UP	
Take-Up Tube Lengths	170mm with 0° / 3°30' / 4°20'
Package Weight Capacity	upto 1800 gms / 2400 gms / 3000 gms
Cradle Type	Alu. Die Cast Cradle with Spring loaded Pressure System
Overfeed	Anodised with Dual De-Tensioner Pulley
Auto Cradle Lifting (ACL)	Pneumatic Lifting with capacity to lift upto 720 Kgs / 240 Positions (optional)
FEED	
Spindle Type	100mm / 122mm / 150mm with SS Container
Feed Type	6" or 8" Cheese / Cone
Balloon Control	Quick-Release Balloon Control SS Pot
Tensioner Type	MS Capsule Type with Knob for Tension setting
Dropper	Metallic with Twist Stopper & Yarn Cutter Blade
Guards	Belt Guard , Brake Guard , Large Separator , Split Guard
DRIVE	
Spindle Drive	'Straight' Path - Tangential Belt
Traverse Drive	Heavy-Duty Enclosed with Motorized Oil Circulation
Spindle Brake	Individual Foot Brake per spindle
Motor Control	Programmable RPM with VFD Inverter
OPERATING PARAMETERS	
Yarn Range (max.)	2/10s - 2/120s *Depends on Spindle Type
Twist Range (recommended)	3-50 TPI / 150-2000 TPM
Spindle Speed (Max)	15000 / 14000 / 12000 RPM* (w/ Balloon Control)
Yarn Speed (Max)	100 mtrs/min
FRAME STRUCTURE	
Structure	Single-Deck, Both Sides
Frame	Laser Cut, Steel Frame Structure, Pre-Assembled at Factory
No. of Spindles	180 / 200 / 220 / 240 Spindles
Connected Motor Power	Medium-Fine Count: 18.75 kW / 25 Hp ; Coarse Count: 22.5 kW / 30 Hp

*Note: Product Technical Specifications May Change Without Prior Notice. It is recommended to verify the important specs before placing order

Spindle		Feed Package Dimensions	Approx. Feed Wgt (Precision Winder)	Suggested Working Range	
Model	Type			Controlled Balloon	Free Balloon
A	100/6	Ø90mm x L.170mm	400 - 450 gms	-NA-	2/40s - 2/120s
B1	122/6	Ø115mm x L.170mm	700 - 800 gms	2/10s - 2/80s	2/30s - 2/120s
B2	122/8	Ø115mm x L.220mm	900 - 1100 gms	2/10s - 2/40s	2/20s - 2/40s
C1	150/6	Ø140mm x L.170mm	1100 - 1300 gms	2/10s - 2/120s	*2/20s - 2/120s
C2	150/8	Ø140mm x L.220mm	1600 - 1800 gms	2/10s - 2/60s	*2/20s - 2/80s

*Only available with Spignle gauge of 250mm

$$\text{Yarn speed (mtrs/min)} = \frac{2 \times \text{Spindle RPM}}{39.37 \times \text{TPI}} \quad \text{Doff time (minutes)} = \frac{\text{Ne} \times 1.693 \times \text{Feed Wgt in gms}}{\text{Yarn Speed in mtrs/min}} \quad \text{Max. Production (gsm/day/spinder)} = \frac{43.2 \times \text{Spindle RPM} \times \text{No. of Ply}}{\text{TPI} \times \text{Ne}}$$

WHY WEAVETECH ? ...



Whatever your **Twisting** or **Weaving** needs be,
Weavetech has a solution.

Since 1985, **Weavetech** (formerly **Alidhra**) has been at the forefront of bringing world-class technologies within the reach of Indian Textile Industry, by encouraging an indigenous development with best-in-industry human resources & engineering infrastructure. It is the same passion that continues today ensuring Weavetech's position within the top of the textile engineering industry having top-of-the-industry Clientele.

Regardless if your company is big or small, **Weavetech** understands that a new machine investment can make a world of difference to your business. The potential source of higher profitability, improved quality & dependable reliability will become just - **if the correct machinery is selected**. Development of **Weavetech's** Machineries has been guided by the needs of customers to extract optimum value from their limited investments in Land, Manpower & Capital, ensuring easiest and fastest absorption of technology without straining their available resources and time.

Weavetech's Machineries are the right step towards **getting more & getting better** value.

PRODUCT RANGE

Rapier Looms | WaterJet Looms | AirJet Looms | TFO Twisters | Thread / Doubler TFO
Carpet Cablers | Industrial TFO | Dye Package Winders | Assembly Winders

CONTACT

<p>For Sales & Service:</p> <p>ALIDHRA WEAVETECH GROUP</p> <p>eM: Sales@Weavetech.com</p> <p>Wb: www.Weavetech.com</p> <p>Ph: +91-261-3070707, 2278374</p>	<p>Manufactured By:</p> <p>WEAVETECH ENGINEERS LTD.</p> <p>Plot A5/4, Road # 10, Gate # 2, Sachin Hojiwala Industrial Estate, Surat, GJ - 394230</p>
---	---

Manufactured By:
WEAVETECH ENGINEERS LTD.
Plot A5/4, Road # 10, Gate # 2,
Sachin Hojiwala Industrial Estate,
Surat, GJ - 394230

<p>Ahmedabad: 1/2 Shree Krishna Center (Tower), Nr. Mithakali Six Roads, Navarangpura, Ahmedabad, GJ - 380009 M: 098335 12703</p>	<p>Mumbai: 8 Vibgyor Towers, G-Block C62, Bandra Kurla Complex, Mumbai, MH - 400098 L: 022 40907282</p>	<p>For Sales Inquiries: Sales@Weavetech.com www.weavetech.com M: 098798 48091</p>
--	--	--

Mumbai:
8 Vibgyor Towers,
G-Block C62,
Bandra Kurla Complex,
Mumbai, MH - 400098
L: 022 40907282

For Sales Inquiries:
Sales@Weavetech.com
www.weavetech.com
M: 098798 48091

Coimbatore: 1045, 3rd Floor, Regus Center Sivari Srirmath, Avinashi Road, Coimbatore, TN - 641018 M: 095975 84555	Surat: Plot 195, Rd 3-F, New Estate, Udyognagar Udhna, Surat, GJ - 394210	R&D Center: Plot 606, Main Rd # 6, Sachin GIDC Gate # 1, Surat, GJ - 394230 E: info@weavetech.com
--	--	--

Surat:
Plot 195, Rd 3-F,
New Estate,
Udyognagar Udhna,
Surat, GJ - 394210
L: 0261 3070700

R&D Center:
Plot 606, Main Rd # 6,
Sachin GIDC Gate # 1,
Surat, GJ - 394230
E: info@weavetech.com

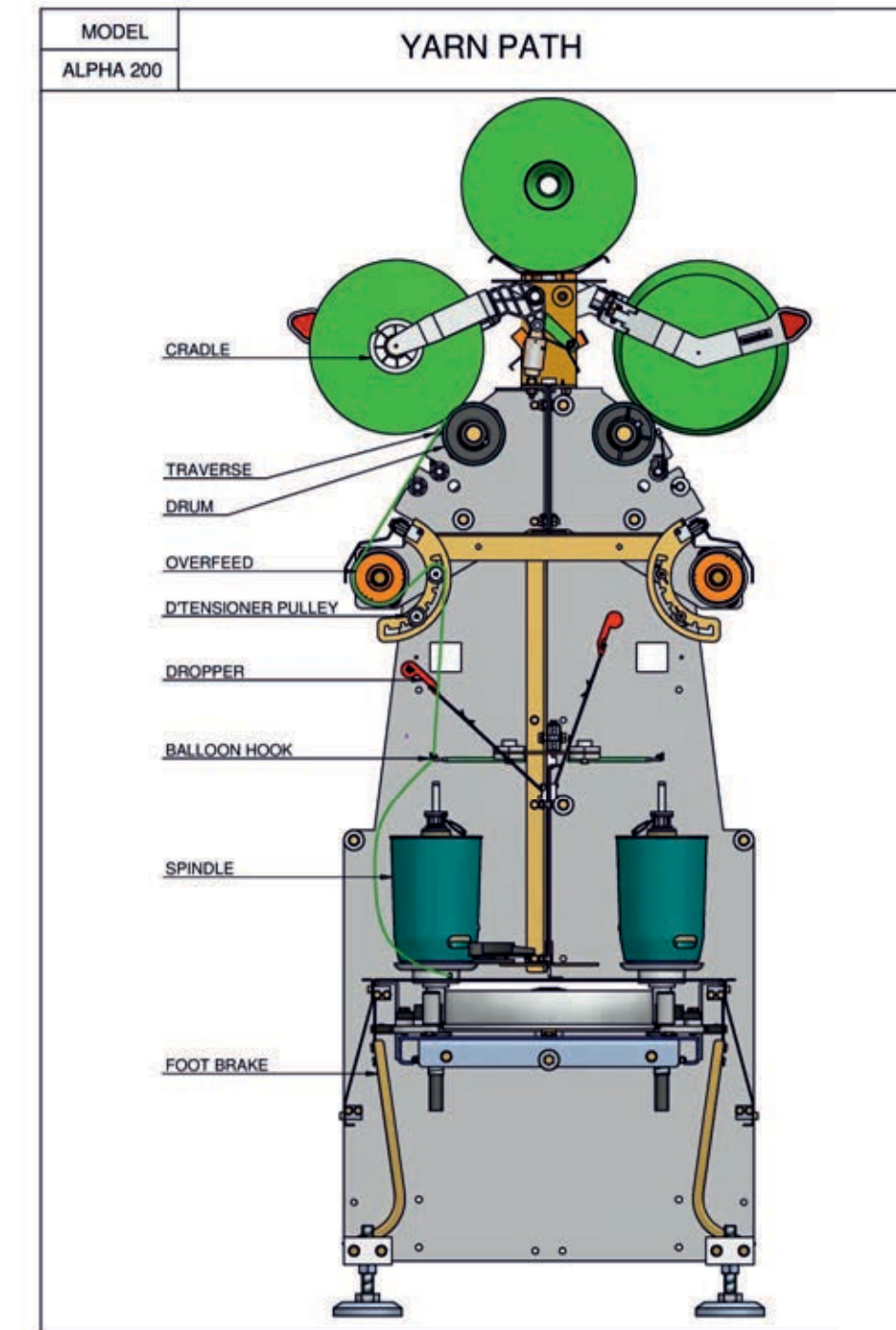
R&D Center:
Plot 606, Main Rd # 6,
Sachin GIDC Gate # 1,
Surat, GJ - 394230
E: info@weavetech.com



alpha

**Spun TFO Twister
(Straight Tangential Drive)**

The image shows a large industrial machine, the Alpha Spun TFO Twister, used for textile spinning. The machine features a series of large, white, cylindrical bobbins mounted on a horizontal frame. Below the bobbins, there are several vertical spindles or bobbins, each with a metallic base. The machine is equipped with various mechanical components, including gears, belts, and sensors, all arranged in a systematic manner. The overall design is modern and functional, typical of high-speed textile manufacturing equipment.



NOTES



Spun TFO Twister with 'Straight' Tangential Belt Drive

Weavetech's Alpha Spun TFO Twister is the most versatile choice to twist wide range of Spun yarns. With many features Alpha targets to increase efficiency & productivity, along with Energy-efficient Spindle design & 'Straight' Tangential Belt Drive, Alpha TFO Twisters achieves the consistent yarn path from position to position for consistent quality & lowest variations.

The Alpha TFO Twisters are designed to increase quality benchmarks vis-a-vis lower quality of yarn being produced on 'curved' Tangential Belt Drive Systems.

Better quality will ensure increase in the bottom-line profits of large production setups for investors thus offering a long term

WHAT IT DELIVERS :

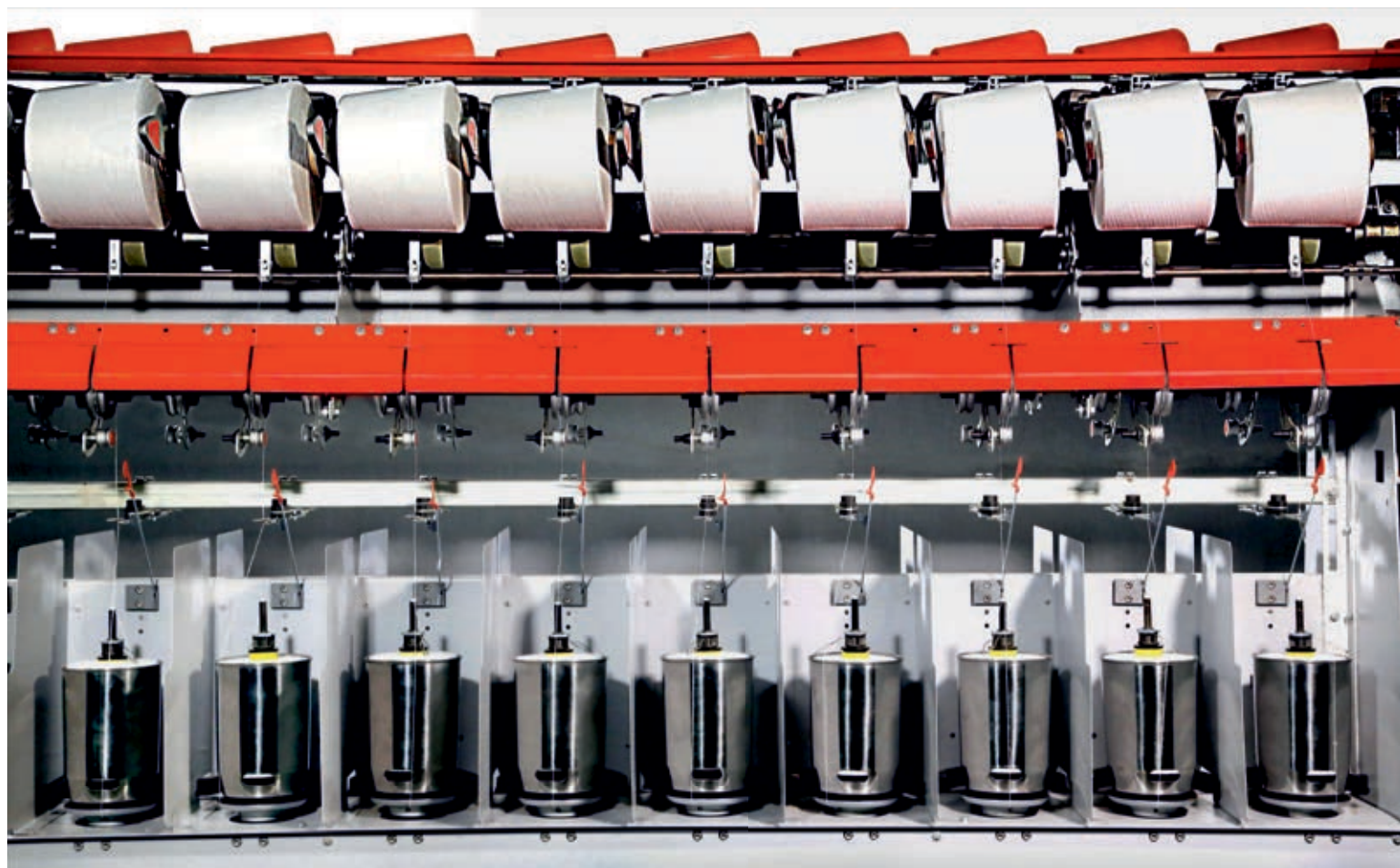
- Identical Yarn Path on all positions for consistent quality.
- High-Quality Twisted Packages with lowest CV% Uniform Package Density for the downstream process.
- Maximum productivity with High speed Large Knotless packages upto 3 Kgs

CURVED vs. STRAIGHT Tangential Drive :

The tangential belt drive is a highly energy efficient system which when implemented incorrectly, can lead to quality issues.

'CURVED' Tangential Drive path has Spindles of a section placed in the curved position. This forces the yarn path of all positions in a section to be different from each other. This leads to CV% to be on the higher side.

'STRAIGHT' Tangential Drive puts all spindles in a straight line with dedicated pressure pulleys at each position. This ensures consistent yarn path while ensuring minimal slippage thus lowering CV% to provide excellent quality packages.



Productivity

Energy-Efficient Spindles

The energy-Saving design of the spindle offers better economy. State of the Art in-house spindle manufacturing allows better quality control as per global standards for reliable & consistent performance output. A wide range of spindles ensures optimum choice for specific ranges of yarn to always prioritize energy saving.

- + Spindle designed to maximize feed package weight without increase in energy costs
- + Open-Design allows complete spindle oil changeover for quicker maintenance
- + Spindles can be removed while machine is under operation for maximum productivity.

ENERGY
SAVER

Dis-Engage Type Foot Brake

Individual Foot-Brake ensures fast doffing & reduces operator fatigue thus extracting maximum labor productivity & higher efficiency.

- + Disengages the spindle completely from the belt
- + Eliminates wear-n-tear of belt & elongates it's life
- + Eliminates Heat-Generation which reduces bearing life of spindles.



Twists setting by Gears

A small set of 6-8 gears, when installed in different combinations, will cover a wide range of Twists. This eliminates having Pulleys & timing belts for wide of twists.

- + Eliminate wide range of costly Timing Belts & Pulleys
- + Quick Changeover within 10 mins ensure high productivity
- + Continuous Operation in Oil Bath ensures lowest maintenance & longest life.



UniBody Take-Up System

Structure & Lubrication

- + A Unibody construction provides all settings in a single gearbox & are conveniently located for ease of use.
- + Continuous oil-circulation ensured by a dedicated motorized pump ensures optimum performance at high speeds.

Anti-Ribboning & Edge Breaking

A built-in gear system in a Unibody gearbox ensures easy changing of Anti-ribboning & traverse modulation parameters with a simple set of gears. Various settings can be achieved with a just few sets of gears applied in different combinations.

Direct Soft Package (optional)

A special kit allows Soft winding with Edge-Breaking mechanism to ensure optimum Soft-Package built for direct Dyeing of packages. Also, in the case of EDS, the user can fully programme the traverse cycles along with variations required to achieve optimal soft-package.

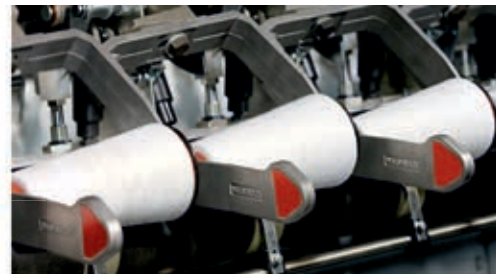


Quality of Yarn & Package

Precision Cradles with Vibration Dampening

Heavy Duty Aluminum Die-Cast Cradle provides the sturdiness required to produce sharp packages.

- + Precision Machined cradle provides accurate positioning during lifting, thus reducing step-formation during knotting or breakages.
- + Pressure system with Dampening ensures lowest stitches by absorbing micro-vibrations caused during operation.
- + Mechanical counterweight of package arm provides uniform pressure throughout package buildup eliminating any 'bulging' of packages..



Dual De-Tensioner

Dual De-Tensioner installed before overfeed allows adjustment of yarn winding tension based on specific requirements of package densities. It regulates the contact area of yarn with overfeeding thus allowing better control of yarn tensions to ensure proper yarn tenacity & quality. It also ensures a longer yarn path for twist settlement after the balloon breaker.



Long SeparatorZs & Belt Guards

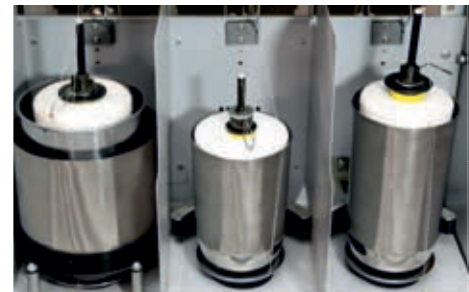
Many guards are provided separate areas of operation from mechanical parts thus ensuring optimum protection from contamination.

- + 'Cell' like high separators covers the yarn balloon from 3 sides reducing air turbulence & energy.
- + The separators also prevent accumulation & contamination of dust & lints from other spindles.
- + Belt guards prevent dust from entering the Twisting Zone of Spindle Drive.



weavetech®
— The best is here —

Technology & Flexibility



Range of Spindles & Gauges

Alpha provides range of options to optimize production of wide range of material & counts without compromising on energy-efficiency enabling maximum productivity & lowest operating costs.

- + Spindle Gauge of 200mm & 250mm ensures maximum space utilization.
- + Balloon Limiter allows extending processable range of counts for the gauge.
- + Special attachments on spindle allow processing of elasticized yarns.

Pneumatic Auto-Lifting Cradle (PALC)

Eliminating the maximum weight limitation of a mechanical auto-lift system, the PALC ensures that any number of spindles can be lifted in case of yarn brakes irrespective of the total weight. PALC eliminates wear-n-tear components from mechanical systems that require high maintenance. The zero-load system also eliminates gearboxes thus saving energy in the regular running.

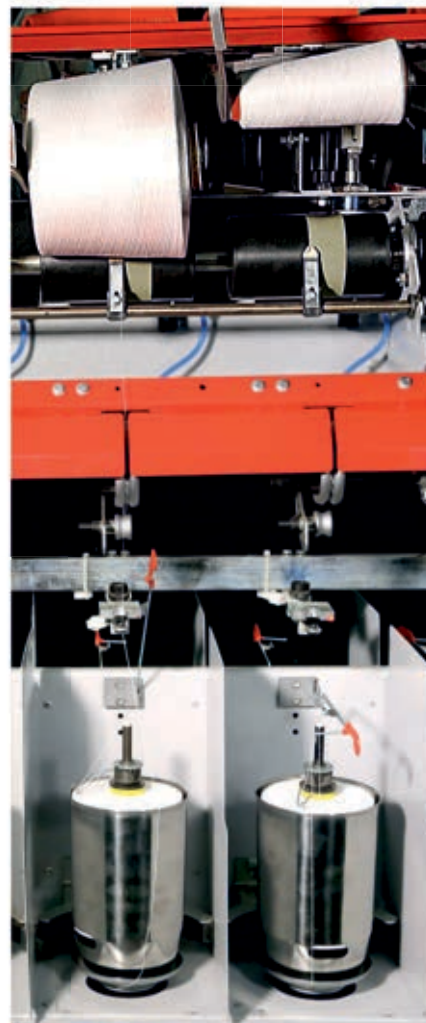
Optical Sensing & Central Indicator (Optional)

High Sensitivity Optical Sensor installed at each position gets activated in case of yarn breakage / absence. A Tower indicator on the Panel notifies the operator from afar regarding the breakage. This ensures minimal effort by operators to supervise breakages & assures the fastest response from operators. In large setups, this feature can help reduce labour by upto 30%.

Electronic Drive System (EDS) (optional)

The EDS is a multi-axis drive system with PLC & Touch Screen HMI to control all working parameters of the machine. Servo Motors ensure precise & stepless setting of all parameters

- + Programmable RPM with Precision AC Spindle Drive & Inverter
- + Programmable TPI with Servo Motor in Takeup
- + Programmable Crossing Angle with Servo Motor for Traverse
- + Synchronised Start/Stop ensures maintenance of accurate ratios.



Pre-Assembled Delivery

Some Weavetech Alpha TFO Twisters models are pre-assembled by trained engineers before dispatch. Factory assembly ensures that the most experienced hands have assembled & tested the machines to WEAVETECH standards so that

the customers get consistent performance & quality.

- + Ensures Consistent & Reliable accuracy, performance & quality.
- + Save time & Start production faster.