

4S SUSTAINABLE
SMART SOLUTIONS FOR
SPINNING
SUCCESS



Non - Auto Leveller
**DRAW FRAME
LDB3 SERIES**



Versatile



Independent drives and automatic
can changer results in increased
process efficiency without com-
promising on sliver quality.

Highly Efficient



Two different types of materials
can be processed simultaneously
at different speeds.

Specific Features

Enhanced Productivity & Economical

- Maximum possible delivery speed of 1100 mpm
- Minimum distance between two heads
- Top roller with specially designed needle bearing system
- Servo drive for draft adjustment (Variant) - Gears eliminated

Efficient

- State-of-the-art drive system with independent drives
- Programmable oscillating stripper for cleaning Top rollers
- Auto cleaned filter screen
- Automatic can changer



Ease of Operation

- Automatic sliver cutting
- Use of touchscreen for delivery speed change
- Unique web collector ensures higher running speeds
- Accurate controls and stop motions

Top Notch Quality

- Shorter travelling of sliver material from drafting to calendering
- Independent deliveries leads to continuous operation and higher output as compared to dependent delivery systems



Available Variants

Simple construction & stable design

LDB3 Variants Offered

- LDB3 S - Electronic drafting drive machine
- LDB3 - Mechanical drafting drive machine

LDB3 S is smarter with following unique features like:

S Draft

The efficient servo motor drive deployed in this variant makes the operation simpler & user friendly. The machine does not require change gears for changing the total draft. User can change the draft by simply keying - in the required value in the display. This eliminates the machine downtime associated with such changeovers. Overall utilization of the machine improves significantly.

Closed Loop Digital Control System on Delivery Sliver (Hank Levelling)

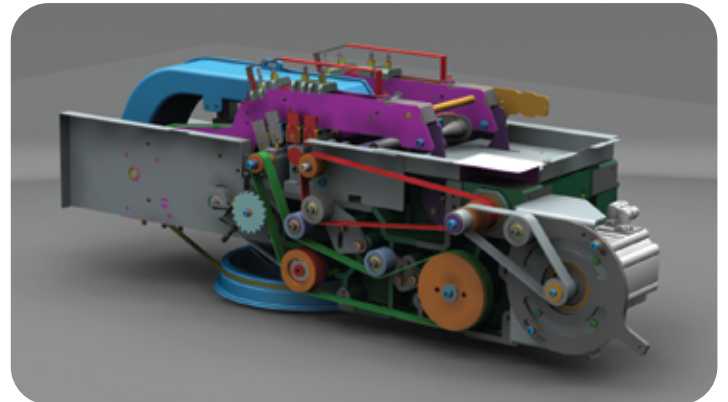
The electronic drafting machine is incorporated with a digital control system. This also acts as an additional control point levelling system, which leads to consistent sliver quality.

Quality Monitoring System

The linear density of the delivered sliver will be monitored continuously. This eventually stops the machine when the linear density deviates beyond a pre-set target range enabling the user to take appropriate corrective action.

QMS monitored parameters include:

- Monitoring of thick places > 2cm
- Spectrogram analysis

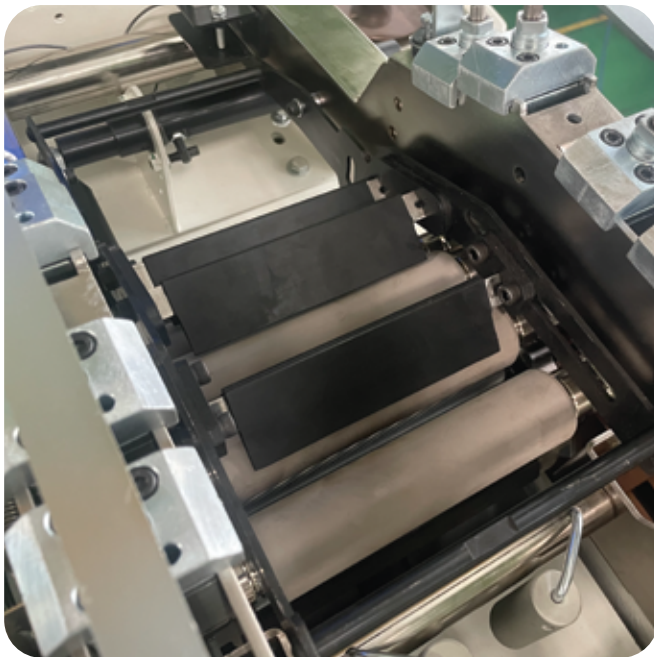


e-Sliver Cutting

The servo drive changes the draft to an extent that the cutting of sliver happens smoothly during can change-over.

Highest delivery speed of 1100 mpm (mechanical) possible in LDB3 S

Highest efficiency with maximum flexibility



Auto Cleaned Top Rollers TR Strip

Cleanliness of the Top rollers in drafting is ensured with programmable oscillating top stripper. Trash or sticky honeydew deposits on the surface of the Top rollers are prevented through well placed stripper lips and are drawn into the suction through lifting of strips at regular intervals of time. It ensures cleaned Top rollers at any instant and thus supports in achieving improved sliver quality and also increases productivity of the machine.

In the event of any lapping on the top rollers, efficient stop motion mechanism stops the machine at the preliminary stage of lapping which reduces the downtime and prevents Top rollers from getting damaged due to hard lapping and increases the life of cots.

Auto Cleaned Filter Screen

For maintaining the optimum suction pressure throughout the running of the machine, the filter screen provided in front of the suction motor is cleaned using wiper during every can change automatically. This leads to a cleaner drafting system at all times.

Inverter for Fan Motor

While processing sliver material with more trash content, higher suction pressure is required. This can be achieved by the inverter controlled fan motor available in LDB3. This feature is in-built in LDB3 S machine and provided as an optional feature in mechanical drafting LDB3 machine.

Higher Efficiency through Large Cans

Least time is consumed with the automatic linear can changing mechanism provided in LDB3. Accommodation of delivery can size (max. 1000 mm diameter) leads to an increase in overall process efficiency, as the operator intervention is minimized.



High Flexibility for Operating Different Materials Simultaneously

Ease of Operation

Sensors & Control Systems

Sensors are provided at all essential points to ensure that the machine is stopped immediately if a sliver breaks out or runs out.



Inverter Control for Main Motor, Coiler, Can drive and Suction Motor

The delivery speed change is possible only through inverter controlled main motor drive. Similar inverter controls are provided for coiler and can drive. Coiler driven by inverter controlled motor results in smooth coiling from the beginning to doffing of cans. Perfect synchronisation is ensured during power failure, normal stop, doffing and restart of machine and this drive has significantly enhanced sliver coiling appearance.



Top Roller with Needle Bearing Arrangement

Uniformly loaded Top rollers helps in trouble free performance during running with lower temperature of Top roller cots. Equipped with needle bearing compartment, the life of the Top roller is improved substantially.



Automatic Sliver Cutting

Mechanical or electronic depending on the machine variant, enables quicker changeover during delivery can change.

Operational parameters change of LDB3 are much faster and simple

Spinconnect 2.0

Digital Automation our Passion

Integration of Draw Frame through **SPIN CONNECT 2.0**

Non-Auto Leveller Draw Frame LDB3 Series can be integrated with Spinconnect 2.0, a web based monitoring and control application. The HMI details are transferred through Wi-Fi / LAN connection and all the parameters can be viewed and controlled from a centralized computer.

Editing of process parameters from a central location for better process control and lot changes across machines.

Remote viewing of machine PLC status from any location for trouble shooting and for software upgradation.

User defined reports and charts for analysing the Draw frame performance can be generated for further improvement.

Predefined shift-wise, daily, weekly, monthly reports can be sent through mail to respective users.

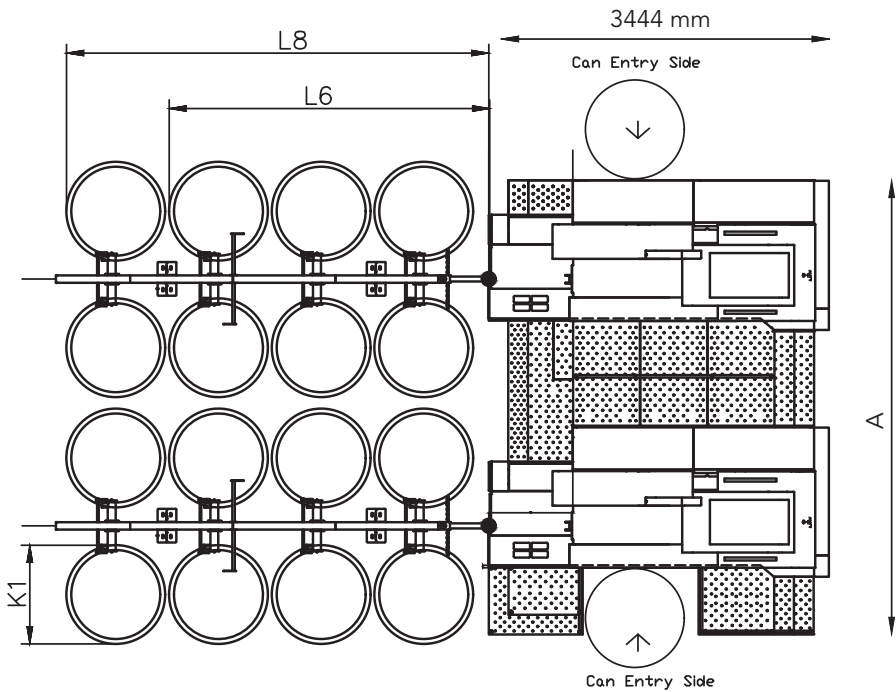


Machine layout

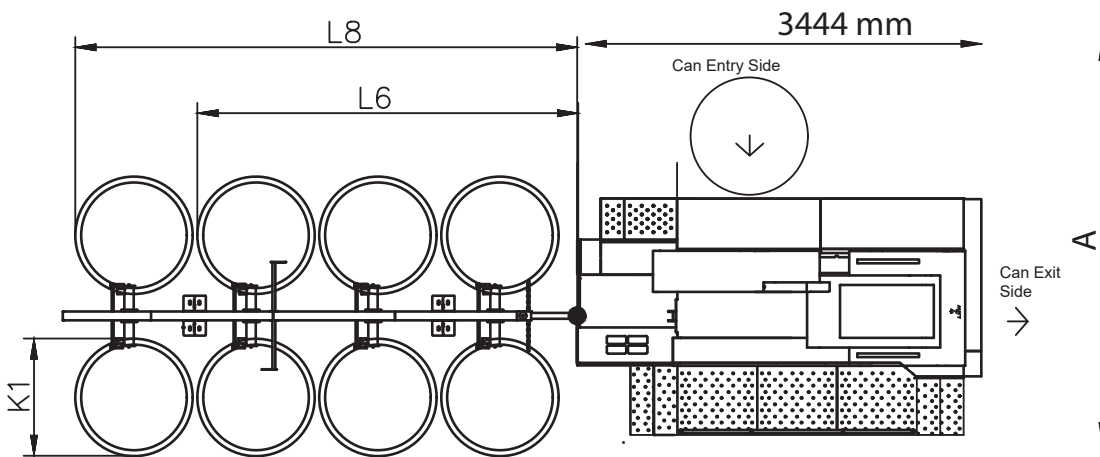
Double Delivery / Delivery can dia. 1000mm

Power Creel

Kl (mm)	A	L6 (mm)	L8 (mm)
600	4600	2403	3045
1000	4600	3316	4354
1200	5223	3838	5708



Single Delivery / Delivery can dia. 1000 mm / Right hand side machine*



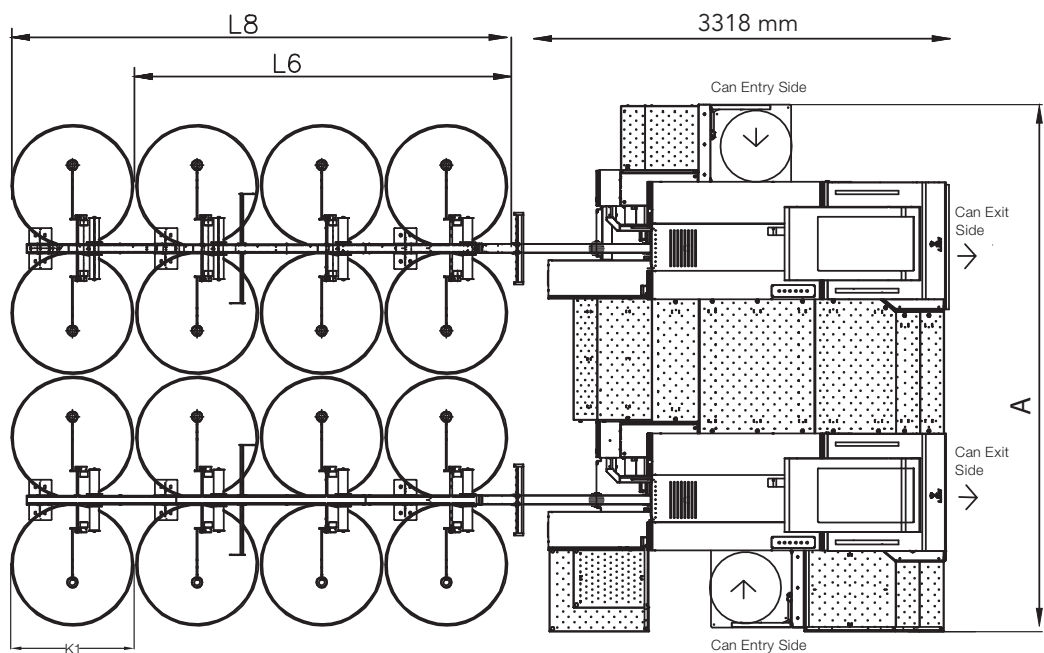
Power Creel *

Kl (mm)	A	L6 (mm)	L8 (mm)
600	2015	2350	3060
1000	2015	3260	4300
1200	2573	3838	5708

*Option for Feed can entry from Left Hand Side of machine is also available.

Machine layout

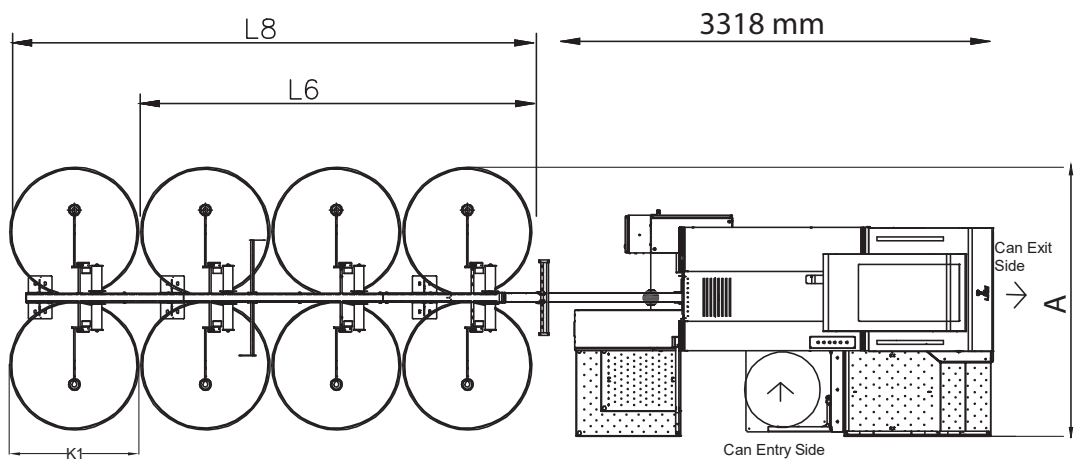
Double Delivery / Delivery can dia. 600mm



Power Creel

Kl (mm)	A	L6 (mm)	L8 (mm)
600	4070	2403	3045
1000	4400	3316	4354

Single Delivery / Delivery can dia. 600 mm / Left hand side machine **



Power Creel

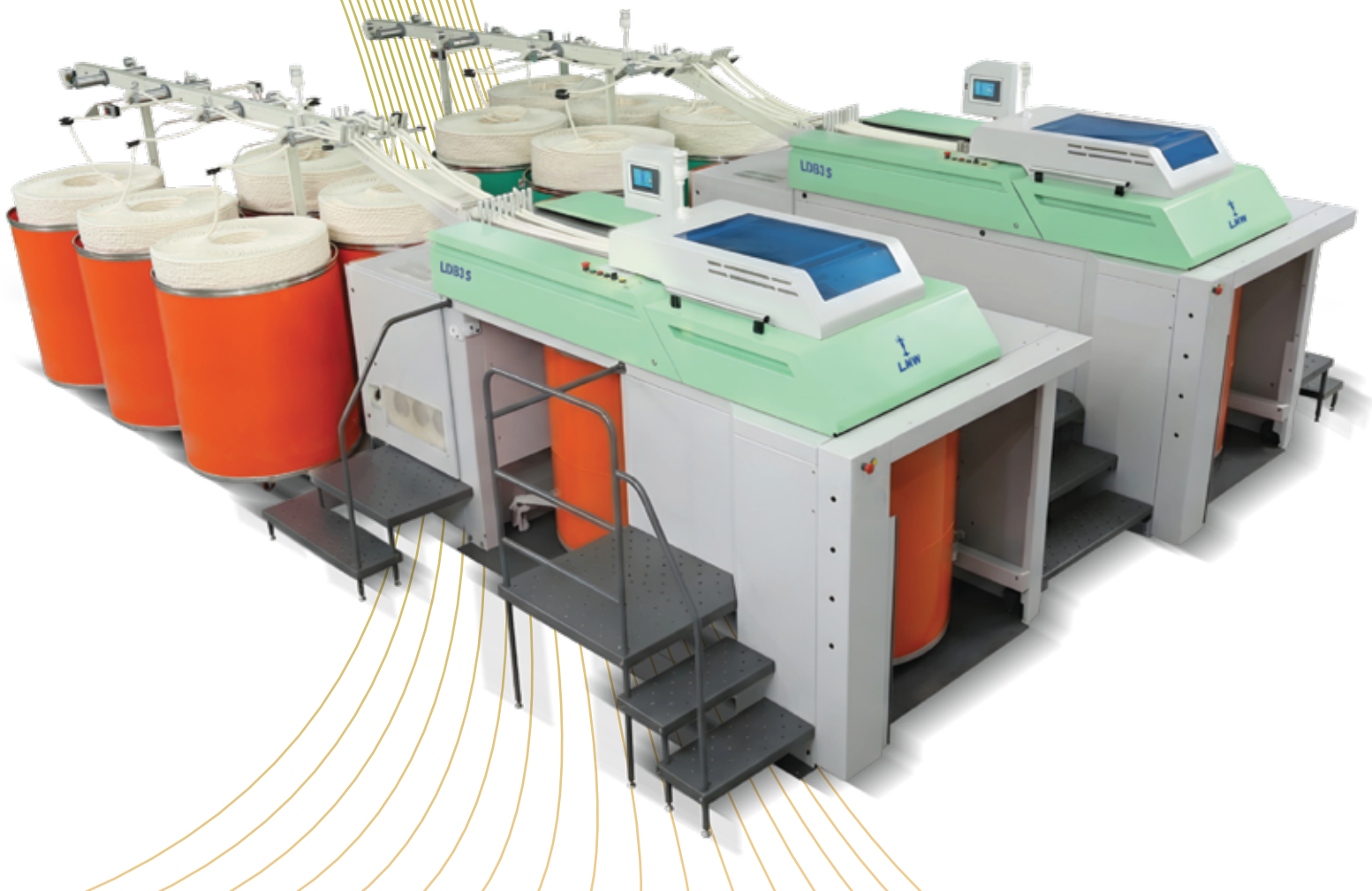
Kl (mm)	A	L6 (mm)	L8 (mm)
600	1800	2403	3045
1000	2130	3316	4354

*Option for Feed can entry from Right Hand Side of machine is also available.

Our Product Range

Our range of Draw Frame machines used for sliver preparation provides many advantages to the end user viz. reducing count variations, Fewer short-term mass variations in the yarn, improving yarn strength, improving the overall efficiency of Roving Frame and Ring Frame. Later on, this also helps for better weaving preparation and in weaving and knitting.

Non - Auto Leveller Draw Frame LDB3 S Double Head



Non - Auto Leveller
Draw Frame LDB3 S
Single Head (LHS)



Non - Auto Leveller
Draw Frame LDB3 S
Single Head (RHS)



Features	Variants	
	LDB3 S	LDB3
Auto-piecing	✓	✗
Automatic can changer	✓	✓
Automatic cleaning of filter	✓	✓
Connection to Spinconnect	✓	✓
Faster release of Top roller load during machine stoppages	✓	✓
Closed loop digital control system on delivery sliver (hank levelling)	✓	✗
Inverter controlled drive for coiler and can plate	✓	Optional
Inverter controlled drive for delivery speed	✓	✓
Inverter controlled drive for suction fan	✓	Optional
Top roller with needle bearing	✓	✓
Programmable oscillating strippers for cleaning Top rollers and stationary strippers for bottom rollers	✓	✓
Quality Monitoring System – Spectrogram & Monitoring of thick place	✓	✗
S Draft (Servo motor for changing draft)	✓	✗
Sliver cutting	Electronic	Mechanical
Special finish for coiler plate (Polyester & Blends)	✓	✓
Spring loaded 4-over-3 drafting system	✓	✓
USB interface	✓	✓
Energy monitoring module	Optional	Optional

Technical Data

Material	:	Cotton, Man-made fibers and Blends
Fiber Length, mm	:	25 to 80
Number of Deliveries	:	One or Two
Delivery Speed, m/min	:	Up to 1100 (mechanical)
Number of Doublings	:	4 to 8 fold
Feed Hank, g/m	:	20 to 50
Delivery Hank, Ne	:	0.07 to 0.24
Draft	:	3.58 to 11.56
Can Size at Delivery, mm	:	Can Dia Can Height 1000 1100, 1220, 1370 600, 500 1200, 1220 Note : Can Height inclusive of Castors
Compressed Air Requirement	:	0.2 Nm ³ /hr at 6 bar
Exhaust Air	:	EAC or EAD
Machine Mountability	:	Mountable on floor or recessed into floor
Feed Table, mm (Upto Can Dia × Can Height)	:	1000 × 1220 600 × 1220 1200 × 1220 1200 × 1300

Installed Power	LDB3 S (Electronic drafting drive)	LDB3 (Mechanical Drafting Drive machine)	
Front + Calendar rollers + Inverter. induction motor.	: 5.0 kW x 2	Option 1 : 7.5 kW x 2	Option 2 : 5.0 kW x 2
Middle rollers + All Back rollers up to Creel Servo motor.	: 2.9 kW x 2		
Coiler + Can drive + inverter Induction motor	: 1.5 kW x 2		: 1.5 kW x 2
Fan drive motor + inverter (optional) Induction motor.	: 1.5 kW x 2	: 1.5 kW x 2	: 1.5 kW x 2
Total installed power	: 10.9 kW x 2	: 9.0 kW x 2	: 8.0 kW x 2



LDB3 S



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