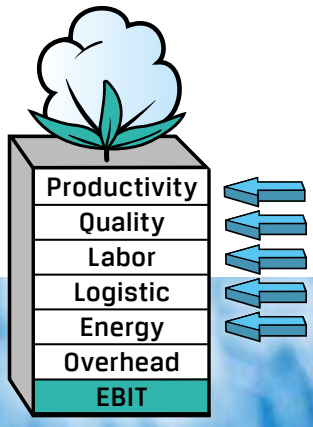
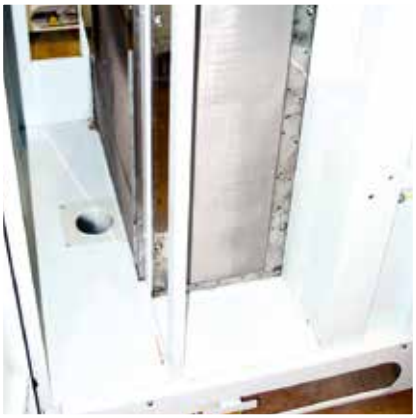
Steinemann
CENTRAL VACUUM SYSTEMS





CVS Applications in Spinning

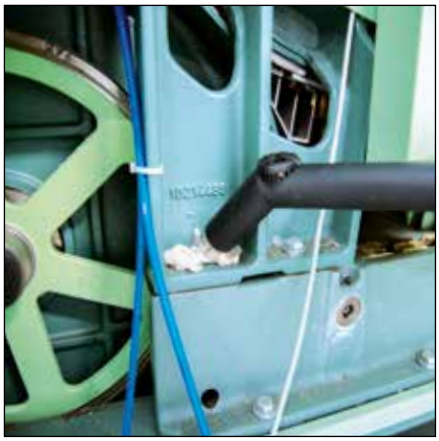
Overview

Spinning sections **- Benefical for card cleaning** **- Automatic hardwaste disposal winder** Intervals for cleaning - according to manufacturers manual (e.g. Rieter, Truetzschler, etc.) - customer schedules	**Manual Cleaning**		**Automatic Waste Disposal**
	daily	weekly	
Blow room	✔		
Card	✔		
Draw frame		✔	
Combing	✔		
Flyer		✔	
Ring spinning		✔	✔
Rotor spinning		✔	✔
Air jet spinning		✔	✔
Winding		✔	✔
Dust collectors, OHC collectors, fiber separators, etc.		✔	✔

✔ for retrofit or selected applications possible

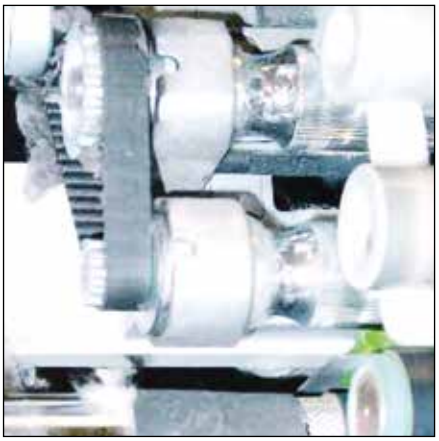
CVS Applications in Spinning

Examples



Card

Ring Spinning



Air Jet Spinning

Reasons why to clean

Info from manufacturer's manual (e.g. Rieter, Truetzschler etc.): **"more unpredictable errors are occurring due to insufficient cleaning"** **To be cleaned**	**Benefits**				
	less wear and tear	less risk for fire	better yarn quality	lower energy	requested by manufacturer manuals
tooth belts (blow room, cards, etc)	✔	✔			✔
drive chains (blow room, etc)	✔				✔
high speed bearings (blowroom cards, etc)	✔	✔			✔
filter screens (all)			✔	✔	✔
motor cooling grid (all)	✔	✔			✔
frequency converter cooling (all)	✔	✔			✔
brakes (ring spindles)	✔				✔
spinning units (rotor- & air jet spin boxes)	✔		✔		✔
winding (splicer mechanics)	✔		✔	✔	✔
surroundings as: piping, transport systems, constructions, A/C inlets, etc		✔			

How to clean

with compressed air?		
disadvantages	**Blowing is not cleaning**	**affects**
dust, fluff, fiber fly goes to	yarn cans i.e. carded sliver	yarn quality
	other machines / spreads from one to next machine	efficiency
	surroundings / tubes / transport systems, etc.	yarn quality, risk
	compressed air is expensive	negativ production cost

with mobile cleaner?		
disadvantages	**Not sufficient for textile mills**	**affects**
heavy unit, logistic	less suction performance = longer cleaning time = less productivity, more logistic	efficiency
	small filter bins = often emptying = longer down time	efficiency
	See sheet: comparison CVS versus Mobile Cleaner	various

with Steinemann CVS —〉see CVS pamphlet and literature
✔ the efficient solution for waste logistics
✔ increasing quality
✔ increasing productivity

Automatic waste disposal with CVS

Open End Spinning

For all O/E suppliers

Stabilized efficiency due to frequent clean filter-chamber
- necessary under pressure at rotor is only with clean filter-chamber granted
- 1% production increase (customer reports)

No dependency of risky labor factor

Solution for both; yarn- & trash-chamber

Machines are getting longer & longer
(more production = more waste!)
Waste-chambers remain the same size!

No manual movements of waste (e.g. in cans) at production area
- Logistic optimisation

See sheet Disposal logistic with O/E spinning machines

Energy saving
clean filter-screen = low inverter level at O/E
Each O/E fan (trash-chamber) is driven by an inverter to save energy. Due to frequent emptying with CVS (approx. every 30 min) the inverter runs always at low level. This saves energy!

Air Jet Spinning

High productivity results in high waste amount

Solution for yarn- & trash-chamber

No fluff and fly from waste outlet (conveyor belt)

Logistic challenge of secondary cycle (waste) solved

Each air jet spinning machine is prepared for Steinemann CVS

Automatic waste disposal with CVS

Winder	
	Fully automated waste handling solution
	No waste in production area
	No production interruption due to emptying (e.g. for Murata / Savio)
	Energy saving clean filter-screen = low inverter level at O/E - Trial at customer showed 5% less energy consumption at each winder, due to frequent disposal - With 7 winders the energy consumption of the CVS was already offset - With more then 7 winders the ROI is positively affected due to energy saving!

Dust collectors / OHC-collectors / Fiber separators / etc.	
	Fully automated solution for waste logistics
	No waste in production area
	Automatic filter cleaning due to high vacuum
	Long distances; e.g. up to 1'000m stretched length without added booster

Clever combination

✔ CVS for different applications.
Experience with up to 100 disposal valves and transport of more then 1000m with one CVS!
The more disposal tasks can be connected to one CVS, the faster is the ROI!

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