


**CS** KSL

**PFAFF**<sup>®</sup> Industrial

Industrial sewing solutions  
for the production of tire cord





Car tires are highly complicated constructions and each single part or layer disappears when vulcanized with a rubber mixture. One of the most important component is the tire cord. This extremely durable fabric ensures that tires stay in form even under enormous pressure. The requirement is equally high for the processing of textile materials as well as the manufacturing machines. During production, the manufacture prefer a sewing technique from PFAFF Industrial and KSL. Both brands acquired decades of know-how in the sewing process as well as the combining of various textile materials. With the machines KL 624, KL 220 and PFAFF 4509, we developed three solutions, which are predestined in the field of tire cord.



## PFAFF 4509

Single-needle lockstitch zigzag high-speed seamer with drop feed for sewing twisted threads for the tire cord industry

- Powerful and reliable sewing machine head
- Quiet low-vibration operation even at top speed
- High tensile strength and durability through the zig-zag stitch
- A special parts kit guarantees the neat and reliable joining of both twined threads
- Thread trimmer and presser foot lift (electro-pneumatically)
- Fresh oil hook lubrication for the hook system
- The machine is independent of air, therefore highly mobile and deployable in production (compressor is integrated)





## KL 220

10-needle special machine (heavy version) for straight sewing of heavy transport belt fabric as well as tire cord fabric and dipped liner (2-layer, approx. 2,000 g/qm)

- Sturdy steel portal for take-up of the cross sewing head
- Linear guiding system with tooth belt drive for cross travel of the mechanically divided cross sewing head
- Less product waste (on both ends of the role), because the machine can be integrated into the material flow
- Min. material width: 600 mm, max. material width: 2,000 mm (up to 3,600 mm on request)
- Pneumatic presser foot lift (automatically)
- Thread withdrawal device for tension free and twist-free withdrawal of the sewing threads
- Tension- and puckering free processing of polyamide, polyester and viscose fabric
- Materials are stacked in min. 2 layers
- Separating unit for chain threads (hot cutting unit)
- Lifiable material clamping at the right of the cross sewing head to fix the material during the sewing process
- Stationary needle holders, left and right of the sewing head, to stretch and fix the material
- Lifting unit to lift the material out of both needle holders
- Photocell monitoring for recognition of the beginning and the end of the material
- Web pass height: 1,040 mm

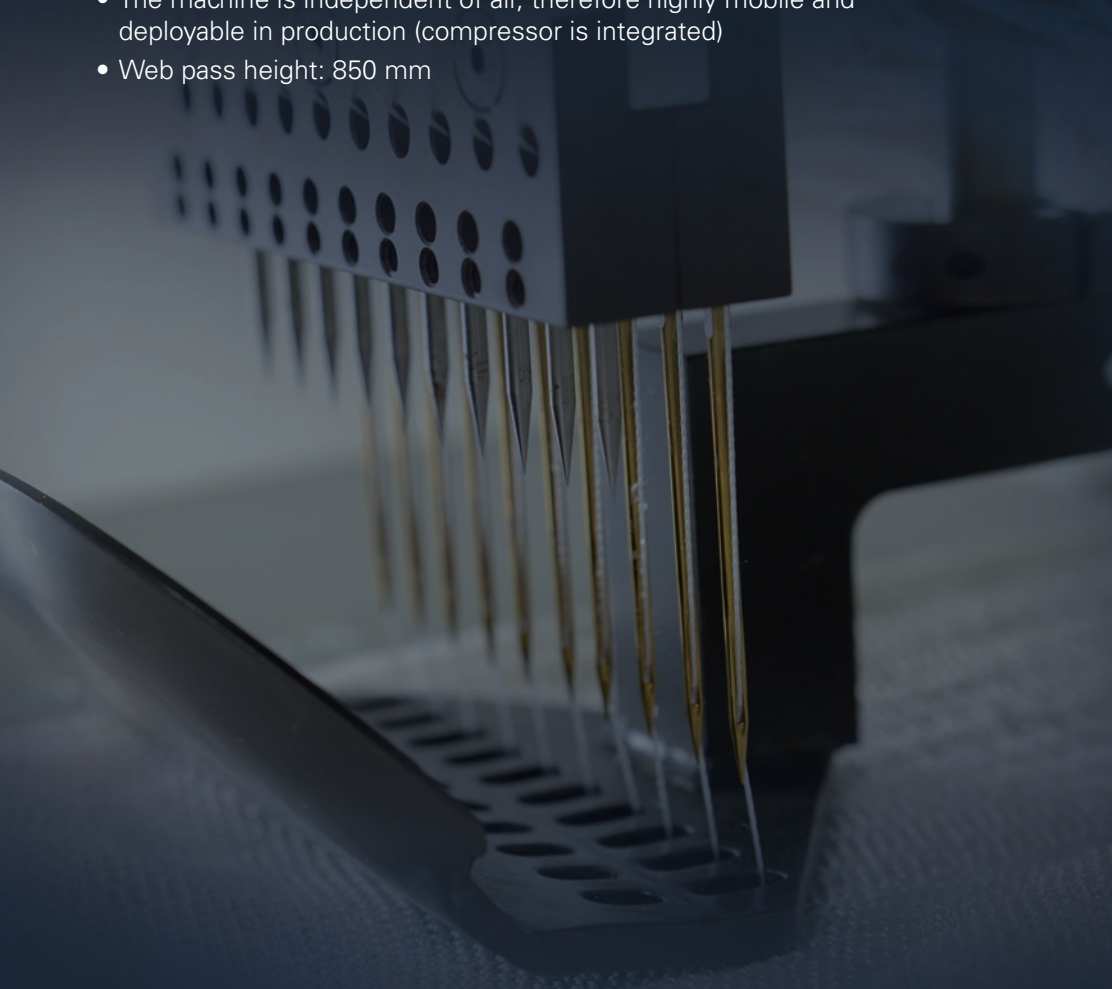




## KL 624 H

10-needle feed-off-the-arm special machine (heavy version) for sewing light transport belt fabric as well as tire cord fabric and dipped liner (2 layers, approx. 6,000 d tex)

- Extreme sturdy machine concept ensures a reliable work
- 1,000 mm clearance under the machine arm - sewing head turned 90° towards the machine arm
- Puller with driven roller
- Pneumatic presser foot lift and puller lift (operated by hand)
- Thread draw-off device for tension free and twist-free draw-off of the sewing threads
- Tension- and puckering free processing of polyamide, polyester and viscose fabric
- Materials are layed in min. 2 layers
- The machine is independent of air, therefore highly mobile and deployable in production (compressor is integrated)
- Web pass height: 850 mm



## Specifications:

	<b>PFAFF 4509</b>	<b>KL 624 H</b>	<b>KL 220</b>
<b>Feeding system</b>	Drop feed	Needle- and foot feed	Needle- and foot feed
<b>Max. sewing speed</b>	3,000 s.p.m.	1,000 s.p.m	1,000 s.p.m.
<b>Max. stitch length</b>	1.5 mm	12 mm	12 mm
<b>Zig-zag width</b>	0.9 - 1.6 mm	--	--
<b>Needle gauge</b>	--	9 mm (10 needles)	9 mm (10 needles)
<b>Stitch type</b>	Lockstitch	Double chainstitch	Double chainstitch
<b>Needle system</b>	438	794 HFR SAN1	794 HFR SAN1
<b>Needle size</b>	Nm 70 (A version) Nm 80 (B version)	Nm 180	Nm 180

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