

PFAFF[®] Industrial



Pp

Production & Praxis

Protective suits

Be on the safe side when processing protective suits!

The production of protective suits (mostly disposable) always represents a challenge for the producer. On the one hand, the clothing that is mostly only used once must be able to be produced as cheaply as possible. On the other hand, the clothing should guarantee particular characteristics, such as maximum protection and/or 100% impermeability in most (use) cases.

What is required here are reliable and repeatable production methods that realize this impermeability of seams. Solutions from PFAFF INDUSTRIAL and MAUSER SPEZIAL will help you sustainably to produce the quality of protective clothing demanded by your customers. Our machine recommendations on next page base on three different manufacturing methods.





Classical method:

Processing with overlock- and lockstitch sewing machine

- Inexpensive production
- Protection against liquid chemicals
- Protection against spray ("spray-tight")
- Protection against dust ("floating particles")
- Not suitable for protection against gases, viruses, bacteria etc.



Classic method with tape sealing (for a maximum seam tightness)

Processing with overlock and lockstitch sewing machines. In addition, all assembly and closing seams are sealed with a tape

- Elaborate production because two operations
- Max. protection! The seams are additionally sealed and prevent penetration of gases, viruses, bacteria through the seams



Modern method (with maximum seam tightness)

Processing with ultrasonic welding machines, which ensures continuous seam tightness of the assembly- and closing seams (without thread and needle)

- Sewing is largely replaced by ultrasonic welding (all closing seams)
- Continuous welding using a welding wheel offers max. protection and prevents the ingress of gases, viruses, bacteria.





	Description	Classical method	Classical (+tape sealing)	Modern method
1	Closing hood seams	MO 6151-PE4-353B16	MO 6151-PE4-353B16 + PFAFF 8303i	PFAFF 8312/8311
2	Closing arm seams	MO 6151-PE4-353B16	MO 6151-PE4-353B16 + PFAFF 8303i	PFAFF 8310-041/002
3	Closing of the back	MO 6151-PE4-353B16	MO 6151-PE4-353B16 + PFAFF 8303i	PFAFF 8312/8311
4	Attaching the hood	MO 6151-PE4-353B16	MO 6151-PE4-353B16 + PFAFF 8303i	PFAFF 8312/8311
5	Closing ample crotch seams	MO 6151-PE4-353B16	MO 6151-PE4-353B16 + PFAFF 8303i	PFAFF 8312/8311
6	Closing crotch seams (front)	MO 6151-PE4-353B16	MO 6151-PE4-353B16 + PFAFF 8303i	PFAFF 8312/8311
7	Closing leg seams	MO 6151-PE4-353B16	MO 6151-PE4-353B16 + PFAFF 8303i	PFAFF 8310-041/002
8	Attaching elastic tape *	MO 6131-PE4-043B04/EF	MO 6131-PE4-043B04/EF + PFAFF 8303i	MO 6131-PE4-043B04/EF
9	Attaching upper part to lower part	MO 6151-PE4-353B16	MO 6151-PE4-353B16 + PFAFF 8303i	PFAFF 8312/8311
10	Attaching elastic tape on ankles, wrists + hood	MO 6131-PE4-043B04 /EF	MO 6131-PE4-043B04/EF	MO 6131-PE4-043B04/EF
11	Inserting zipper (left)	PFAFF 2083	PFAFF 2083	PFAFF 8312/8311
12	Inserting zipper and fly facing (right)	PFAFF 2083	PFAFF 2083 + PFAFF 8303i	PFAFF 8312/8311
13	Top-stitching of fly facing	PFAFF 2083	PFAFF 2083	PFAFF 8312/8311

* alternative: fixing the tape with pressing machine



PFAFF 2083

Single-needle lock-stitch highspeed seamer
+ Zippy edge foot (right): No. 91-054652-23/002
+ Zippy edge foot (left): No. 91-054651-23/002



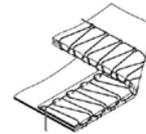
MO 6151-PE4-353B16

2-Needle (5-threads) safety stitch machine for permanent closing of non-woven fabrics



MO 6131-PE4-043B04/EF

1-Needle (3-threads) overlock machine for attaching elastic tape



PFAFF 8303i-840-002

Hot-air taping machine (seam sealing)



Standard:
with small wheel



Special:
Cut & Seal Dual



PFAFF 8312-014/001/8311-001-001

Flat-bed ultrasonic welding machine



PFAFF 8310-041/002

Feed-of-the-arm ultrasonic welding machine





PFAFF 2083

Single-needle lock-stitch high-speed seamer with drop feed

- For 50 years "dry machine" (no oil sump)
- Good stitch length continuity and seam quality
- Large hook (G) with 50 % more capacity than conventional hooks (Option)
- High flexibility due to the adjustable needle bar stroke (30.0 to 36.0 mm): One machine for all material thicknesses
- Eccentric for tilted position of the feed dog
- Large clearance under machine arm (300 mm)
- Knife/catcher change on thread trimmer without readjustment
- Integrated solutions for presser foot lift, backtacking mechanism without compressed air
- Stitch length up to 6 mm – forwards and reverse (on the C-Version)
- -909/14: Thread pulling device for neat seam start with thread clamp (Option)

Specifications

- Max. stitch length: 6.0 mm
- Max. speed: 5,500 s.p.m.
- Clearance under sewing foot: 13.0 mm



MO 6151-PE4-353B16

2-Needle (5-threads) safety stitch machine for permanent closing of non-woven fabrics

- Perfect sewing properties on medium to heavy materials even in the higher speed range
- Automatic presser foot lifting and thread-chain cutting is standard
- Depending on process requirements automatic, semi-automatic and normal sewing mode can be selectable
- Convenient operation via voice broadcast intelligent operation panel
- Simple stitch length adjustment by a push-button
- Easy adjustment of the differential feed ratio (fine adjustment)
- Low-maintenance due to the fully-automatic lubrication

DC x 27 2	5	3.2, 5.0	4, 5	6000	sti/min



MO 6131-PE4-043B04/EF

1-Needle (3-threads) overlock machine for attaching elastic tape

- Perfect sewing properties on medium to heavy materials even in the higher speed range
- Automatic presser foot lifting and thread-chain cutting is standard
- Depending on process requirements automatic, semi-automatic and normal sewing mode can be selectable
- Convenient operation via voice broadcast intelligent operation panel
- Simple stitch length adjustment by a push-button
- Easy adjustment of the differential feed ratio (fine adjustment)
- Low-maintenance due to the fully-automatic lubrication
- EF-Version: Tape guide (with automatic cutter) for a reliable feeding of the elastic tape (with maximum gathering properties)

DC x 1 1	3	—	4, 5	6500	sti/min



PFAFF 8303i-840-002

Hot-air taping machine (seam sealing)

- A Up to 50 welding recipes can be stored and called up
- Maximum reproducibility of the welding process
- 20% increased productivity in comparison to other tape welding machines
- Up to 15% reduction of the amount of tape used compared to standard machines
- Separately driven rollers for smooth seams and differentiation
- Touch screen for a simple handling by pictograms
- Recipes protected via password
- Appropriate to all tape welding operations which require a high level of process reliability and a reproducible quality
- Tape cutter with separate drive
- Variable post concept (post width 25, 28 and 32 mm and post positions like post from front, vertical post and post from back)
- Several roller diameters are available: 45 mm for standard operations, 25 mm for operations with narrow curves)
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Specifications

- Welding speed: max. 7 m/min. (standard), up to 20 m/min optional
- Width of nozzles: 10 - 30 mm (other available)
- Heating capacity: 3,600 W



PFAFF 8311-001-001/8312-014-001

Flat-bed ultrasonic welding machine

- Amplitude or power, speed and pressure are controlled electronically
- 100% reproducibility of the welding process
- Most of thermoplastic sheets, laminates, textiles and non-wovens are weldable
- Equipped with differential feed; separate drive for sonotrode and anvil wheel; that means smooth, non-distorted seams or the possibility of adding a some fullness
- Process reliability through monitoring of welding parameters with integrated device for the control of the amplitude (so that reliable processing is possible even when sewing over cross seams)
- Touch screen: Simple handling with pictograms
- Process reliability by monitoring of welding parameters (constant performance)
- 8312 CS dual: Cut the edges, seal them and seam a second weld seam
- New machine 8311 with unrivaled attributes:
 - Continuous welding force monitoring
 - Cutting wheel can be activated by motor

Specifications

- Max. speed: 0.5 to 10 m/min. / Optional up to: 20 m/min.
- Seam width: 1.0 to 10.0 mm
- Ultrasonic frequency: 35 KHZ



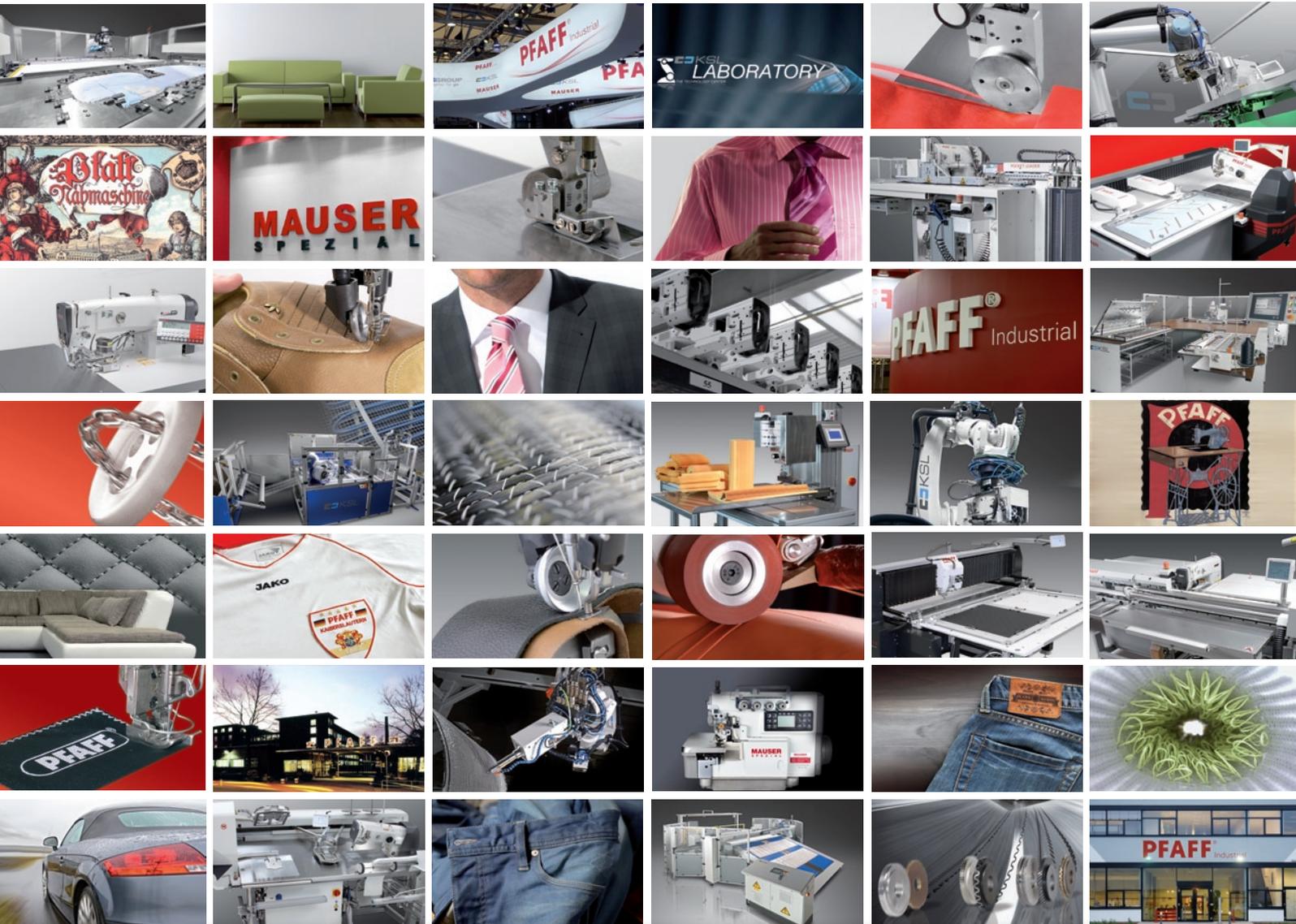
PFAFF 8310-041/002

Feed-of-the arm ultrasonic welding machine

- Amplitude or power, speed and pressure are controlled electronically
- 100% reproducibility of the welding process
- Most of thermoplastic sheets, laminates, textiles and non-wovens are weldable
- Equipped with differential feed; separate drive for sonotrode and anvil wheel; that means smooth, non-distorted seams or the possibility of adding a some fullness
- Process reliability through monitoring of welding parameters with integrated device for the control of the amplitude (so that reliable processing is possible even when sewing over cross seams)
- Touch screen (simple handling with pictograms): Single segments and complete processes are programmable
- Process reliability by monitoring of welding parameters (constant performance)
- 8310-041/002: Top sonotrode, feed-off-the-arm version

Specifications

- Max. speed: 0.5 to 10 m/min. / Optional up to: 20 m/min.
- Seam width: 1.0 to 10.0 mm
- Ultrasonic frequency: 35 KHZ



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