z-automation®

INSPIRING PARTNER

AUTOMATED SPLICING SYSTEM

z-inline splicing

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z-inline splicing

Integrated splicing of sealing rings, automated and directly coupled to the extrusion line

Maximum process reliability and highest degree of automation
Direct coupling of z-inline-splicing to the extrusion line leads to minimum operator involvement which guarantees highest process reliability and lowest possible scrap rate and avoids buffering between extrusion and further processing

Fit for profiles with metal carriers and demanding cross section
Integrated face-grinding of the profile ends before the actual gluing process. This guarantees independence from the profile structure and the rough cut. Product specific clamping elements designed with experience lead to excellent results – also with carrier-less cross sections or Butyl-afflicted profiles

Splice with highest optical and technical quality
Thin film splice with proved binding strength. The splice is permeable to air and water due to integrated hole punching of splicing foil

Capable PE-splicing process
Automatically regulated heating process, stable against external influences like changes of hall temperature or draft. No more manual heating readjustments – even with a cold machine at the beginning of a shift the first profile is good

Durable investment: universal machine – product specific tools
Tool change within a few minutes due to standardized quick change interfaces

Maintenance and service
Well-proven system, installed standard components for global supply, detailed instruction and service manual, maintenance via online remote control

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z-inline splicing specification

Profile	Cross sections ≤ 50 x 40 mm
	2 - 4 splicing cavities
	Profile length ≥ ~3000 mm | ≤ ~4000 mm (options ≥ ~2500 mm | > ~4000 mm | > ~4700 - 6800 mm available)
Technology	- processing and splicing of the sealing profiles is directly coupled to the extrusion line - Different profile cross sections settable due to quick tool change - Automated loading of profiles from the extrusion line onto multiple workpiece carriers, which are forwarded to the operator-controlled loading station - Manual inserting of 2 – 4 profiles into clamping system towards a stopper (operator) - Automatic two-stage grinding process at both ends of profiles makes plane contact surfaces. Grinding stock between 0,5 and 1,2 mm. Suction mechanism for grinding dust is prepared - Gluing technology: Heating of profile-ends and PE-foil with controlled process and connecting by pretension and holding in position - Automated tearing off foil overlappings - Manual unloading into transport boxes (operator) - Typical cycle time for one sealing ring 10 s – this leads to a extrusion rate of up to 25 m/min. The high performance model even reaches up to 35 m/min. - Foil width 2x50, 2x60, 2x70 resp. 1x140, 1x150 mm - PE-foil optionally perforated (hole punched) in tube areas of the profile’s cross section - Option: tearing of an assembly cord left and right of the splice - The system is positioned at the end of the extrusion line – layout as left or right version. Width x depth x hight e.g. 8000 x 5500 x 3500 mm
Manufacturer	z-werkzeugbau-gmbh under the brand z-automation, 6850 Dornbirn / Austria

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z-inline splicing optional features

- Profile turning unit
  to place profiles in the ideal position for the splicing process. Thus independence from the extrusion position.
- Suction-aggregate with wet separator for removal of the grinding dust
- Integrated and automatic placing of heat tapes.
  These tapes are for easy removal of the tape liner protection film of carrier-less door seals: A snap head cuts the tapes from the roll and applies them on up to 4 profiles in this “heat tabber”
- Integrated tearing of an assembly cord left and right of the splice
- Remote service via internet online remote control

z- inline splicing profile-related clamping tool parts

- Clamping tool parts
  The clamping situation depends on the profile and is agreed with the customer. If necessary it is determined and optimized with prototype clamping parts. For complex profile cross sections the standard clamping between two clamping halves might not be sufficient – additional movable clamping parts will be integrated.
- Foil hole punching tool
  if the splice in the tube sections must be permeable to air and water

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