

Title (en)
Singulation module/belt for separating sheet material

Title (de)
Vereinzelungsmodul/-band zur Trennung von blattförmigem Material

Title (fr)
Module/courroie de séparation pour séparer un matériau en feuilles

Publication
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Application
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Priority
US 59029406 A 20061031

Abstract (en)
A singulating module/belt including a conveyor belt (14a,14b,14c) for moving a stack (12) of sheet material toward a pair of take-away rollers in one direction and a singulation belt (20a,20b) moving in an opposing direction for retarding the motion of the upper sheets of the stack (12). The singulation belt (20a,20b) is characterized by a compliant face surface which separates sheet material without damaging or tearing the sheets during singulation. In the described embodiment, the cross section of the belt (20a,20b) includes a plurality of grooves defining a plurality of longitudinal ribs therebetween. The ribs define a cumulative width dimension in contact with the sheet material (12) which is within a range of between about 0.55 to about 0.85 of the width dimension of the belt (20a,20b). Furthermore, the height dimension of each rib is within a range of between about 0.20 to about 0.8 of the height dimension of the belt (20a,20b). Moreover, each rib thereof defines an aspect ratio (RW/RH) including a width dimension RW in contact with the sheet material and a height dimension RH measured from a core of the singulation belt. The aspect ratio is within a range of between about 0.5 to about 2.0.

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