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The Adaptable Conservation Book Support (ACBS): A DIY, Open-Design Tool

The Adaptable Conservation Book Support (ACBS) is a tool designed to safely secure books in an open position, either to assist in conservation treatment of the interior or in digitization workflows. The clamping system uses flexible fiberglass rods with vinyl endcaps to provide gentle support with minimal, highly adaptable contact. The ACBS is intended to be both DIY and open-design.

The primary joint of the ACBS can be adjusted between 0 and 180 degrees to accommodate various binding flexibilities. This is especially useful when handling volumes with particularly tight or fragile bindings, or when dealing with heavily degraded paper text-blocks that risk further damage from use.

The adjustable clamping system allows books of different thicknesses to be braced. This also allows for any portion of the book to be supported; the clamp is able to secure just a single board, or the majority of a thick text-block. This is particularly helpful when damage is present throughout the volume.

The clamping system can be adjusted along all three dimensions. The rods can be placed at any location, allowing the contact to avoid delicate media, photographs, or damaged areas. They can also be quickly lifted to allow page-turning.

DIY
All parts for assembling the tool can be purchased online for a small cost (currently at a total of roughly 80 USD), and putting it together takes only a few hours. Assembly requires clamps, a hand drill, a screwdriver, an Allen wrench, and a box cutter.

OPEN-DESIGN
Conservation is a field full of creative and inventive people, and we are all working with different types of materials. The current design is far from perfect. Others will be able to suggest better parts, or design alterations, or entirely different versions of the ACBS. The intention is for it to be a collaborative, ever-evolving tool.

The ACBS assembly instructions and supplies list have been uploaded to the AIC Wiki's Book and Paper Group section, under the "Materials, Equipment, and Tools" chapter. [http://www.conservation-wiki.com/wiki/BPG_Materials,_Equipment,_and_Tools]

In July 2020, the first ACBS design alteration outside of Northwestern University was made by a team at the Auckland War Memorial Museum (Auckland, New Zealand). The team designed a 3D-printable mechanism to function as the arm that holds the clamping rods, which improves the clamping functionality. The team has shared the design files for others hoping to print their own.

Please contact the author with any questions or suggestions.

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Sources of Materials

The complete list of materials and suppliers is available (along with the assembly instructions) on the AIC Wiki, under the "BPG Materials, Equipment, and Tools" page.

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