



Composite body: design and selection of the most suitable structure

As a real player on the composite market by offering efficient solutions to machine this material, Asahi Diamond's knowledge of composite has contributed significantly to the development of innovative tools.

Incorporating composite material into the design of grinding wheels provides lightness and absorbs vibration. Products made of composite body reduce energy consumption from the spindle and increase its lifespan, maintain the machine, improve surface finish and handling of grinding wheels. There are a variety of benefits depending on the choice of composite assembly. Asahi Diamond is able to offer various composite body combinations.

In order to control costs and develop in a strategic market, Asahi Diamond Europe has invested in dedicated production facilities for the manufacturing of composite bodies. Asahi is now able to manufacture various types of design, all 100% in house, thanks to developments made by its dedicated department and its partner company specialized in composites (Solutions Composites).

From centerless grinding wheels, to large diameter grinding wheels with double rims, Asahi can design and manufacture the most suitable body depending on application.

Design of wheel bodies in:

- carbon fiber or glass to produce complex geometries,
- carbon fiber and foam for a very light body with better performance,
- filament winding (carbon / linen) to offer completely adjustable thickness,
- or as a "sandwich" carbon / glass offering an attractive price for wheel thicknesses of less than 35mm.



Therefore, the range is wide and allows the operator to adapt the structure as needed.

Weight comparison for wheel type 1A1 Ø200T25X3 :

Carbon / Foam:	Filament winding	All carbon:	Sandwich :	All glass :	Aluminium:	Steel:
580 g	1084 g	1169 g	1417 g	1535 g	2011 g	5628 g

Asahi Diamond’s approach to the constant evolution in tool design in composite markets demonstrates how the requirements of users can push development and the design of constantly evolving tools, to offer greater precision and performance, both in machining and usage of composites.