

# Flatting Wheels – Metal or Resin



## Flatting of glass

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## Flatting wheels

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# Flattening of glass

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## Introduction

The flattening procedure is the operation that consists in grinding the edge of drinking glasses to remove all the scratches and to finish the edge parallel to its base (foot). This operation is performed just after cutting, which generally produces an unacceptable edge quality, except for standard quality glass. Flattening has replaced the operation formerly carried out using silicon carbide abrasive belts.

## The tools

### Standard

The flattening disc has a diamond layer which is 20 to 40 mm wide and 0.5 to 1 mm thick, mounted on a thin backing ensuring the necessary flexibility when grinding.

Two versions are available depending on the rim shape:

- the **1M2** wheel with complete flat rim,
- the **1Y2** wheel on which the diamond rim and backing present an angle to the outer edge ("entry tilt"). This type of wheel is protected by an **ALTIFORT-BOART** patent.

### Evolution

The recent developments in machines, together with the aim of improving the performances have resulted in the introduction of several improvements in the flattening wheels:

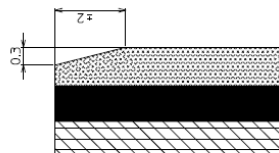
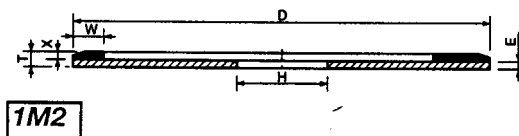
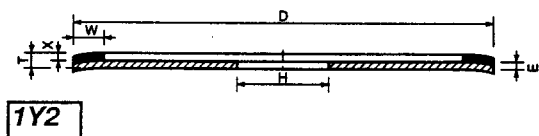
- The introduction of an elastic layer between the diamond rim and the backing. This innovation increases the quality of the work by absorbing the unwanted vibrations.
- The use of new resin bonds that bring together an improved abrasiveness and surface finish compared to normal metal bond wheels, whilst retaining competitive tool life:
- The alternative choice in the backing: instead of the traditional steel (0.5mm), ALTIFORT-BOART proposes a backing in composite (1.5 mm) which presents such a flexibility that it allows to reduce and even to suppress counter-backing usually used with standard versions. Moreover, this backing presents the advantage to resist corrosion.

## The machines

The combination of the performance of the existing machines and constantly improved tools has provided the industry with a unique "system". Together with the improved quality of the glass, this has increased productivity and profitability. The most up-to-date machines can presently reach production rates of about 5000 pieces/hours, flattening from roughing to finishing in several steps.

# Flattening wheels

## Geometric definition



### ALTIFORT-BOART Form

\*30U-D-W-X-Specification-H/T-E – Type of body – FEPA 1Y2

\*30W- D-W-X-Specification-H/T-E – Type of body – FEPA 1M2

\*L = metal bond, \*K = resin bond

## Types of executions

Three types of execution:

**Type S:** for Standard execution, diamond layer upon steel core

**Type GS:** for diamond layer glued with rubber on steel core (« Glued on Steel »)

**Type GC:** for diamond layer glued with rubber on a composite core (« Glued on Composite »)

The glue seal is made up of an elastomer thickness of about 1 mm.

## Availability

Bond	ALTIFORT-BOART Form	FEPA	D	W	X	Recommended Grit	Execution
Metal	L30U	1Y2	150 - 200	20 - 30 - 40	0.5	D181 à D151	S-GS-GC
Metal	L30W	1M2	150 - 200	20 - 30 - 40	0.5	D181 à D91	S-GS-GC
Resin	K30U	1Y2	200	20 - 30 - 40	1.5	D64 et D54	GS - GC
Resin	K30W	1M2	200	30	1.5	D64 à D39	GS

## Order example

L30U-D-W-X-Specification-H/T-E-Type of body - FEPA 1Y2 – Metallic

L30U-200-30-0.5-D46-MG50J-24/T1.5-E0.5-GS