

## 1/ General tolerances for raw material thicknesses (for these materials, tolerances remain to be confirmed depending on the sources)

Extruded material thicknesses ABS and H.I.P.S (High Impact PolyStyrene)	Tolerances (mm)	Extruded PVC material thicknesses (mm)	Tolerances (mm)	Extruded PMMA material thicknesses (mm)	Tolerances	Cast PPMA material thicknesses (CN) (mm)	Tolerances
2	+0 / -0.2	1	+/- 0.13 *	1.5	+/- 10%	3	+/- 20%
3	+0 / -0.2	2	+/- 0.16	2	+/- 10%	5	+/- 20%
4	+0 / -0.2	3	+/- 0.20	3	+/- 5%	6	+/- 20%
6	+0 / -0.3	4	+/- 0.22	4	+/- 5%	8	+/- 20%
8	+0 / -0.3	5	+/- 0.25	5	+/- 5%	10	+/- 20%
10	+0 / -0.3	6	+/- 0.28	6	+/- 5%	15	+/- 20%
		8	+/- 0.34	8	+/- 5%		
		10	+/- 0.40	10	+/- 5%		

\* +/- (0,1 + 0,03 x thickness - For example: PVC 20mm = +/- 0,70mm

## 2/ General linear tolerances REVOLUPLAST

These tolerances relate to our uses for the dimensions of parts machined from a thermoplastic plate on 3 axes, and mainly in ABS and PS Choc.

**These tolerances are non-contractual and can be reduced in certain cases of simple assemblies** (for material thicknesses between 3 and 4mm), but also increased by 30% for material thicknesses greater than or equal to 6 mm, depending on the materials used of the shape of the part (number or folding types.) **This is why it is important to identify your requirements on functional dimensions and their proper consideration by our services.** Without precise notification of these on your plans alongside your elements or your specifications upon consultation the general tolerances opposite will be used in our production. The unsurfaced material thicknesses mainly fall under extrusion tolerances. (See the material thickness table above).

MACHINING (cutting, drilling and countersinking)		ASSEMBLIES with folding and gluing (ABS and PS CHOC)	
Dimensions in mm	Tolerances	Dimensions in mm	Tolerances
1 to 100	+/- 0.2	10 à 100	+/- 0.5
100 à 200	+/- 0.3	100 à 200	+/- 0.5
200 à 400	+/- 0.4	200 à 400	+/- 0.7
> à 400	ISO 2768 m standard	400 à 600	+/- 1
		> 600	Norme ISO 2768 c

Assembling and gluing cannot be guaranteed in terms of resistance (IK) and watertightness (IP).

As each project is specific, all manufacturing requires prior validation by the customer of a qualification part, enabling the client to carry out its own checks and tests under actual conditions of use. A mechanical replica of this model will be archived on our side.

Our general tolerances on ABS and HIPS materials are +/- 0.2mm for machining in the same phase, +/- 0.5mm after bending or assembly.

These tolerances may be increased by 30% for material thicknesses of 6mm or more, depending on the material or shape of the part.

Given the specific nature of our process, quantities shipped may vary within +/- 5% of the quantity ordered.

Unless otherwise specified, prices quoted take into account the above conditions, as well as the appearance and resistance criteria customary to our business and assembly methods.

## General technical specifications and appearance criteria

### 3/ Appearance criteria

<p style="text-align: center;"><b>Appearance requirement for external parts.</b></p> <p style="text-align: center;">A product can include several parts, with different requirement levels, so please let us know.  <b>Unless stated otherwise, the prices quoted take into account the "STANDARD" conditions customary in our business.</b>            These levels of requirement are valid for a visual inspection holding the part at arm's length (~60cm), under natural lighting.</p>			
	<b>Low</b> Concealed or mechanical part	<b>STANDARD</b> Neat looking part	<b>Height</b> Appearance part (to be specified before quotation)
<b>Scratches</b> (grained side)	Scratches possible and acceptable	Not pronounced scratches. Micro-scratches accepted, except on the front side (user side and close to a display)	No defect accepted on the front side. (user side and close to a display) nor the sides. But a few rare defects barely visible to the naked eye are tolerated on the technical or secondary faces.  If internal metallization after assembly, with unpainted areas and rework.  Precise positioning of markings to be defined.
<b>Material defects</b>	Material defects accepted. (difference in color, extrusion defect, impurity)	Material defects barely visible to the naked eye (color according to supplier specifications: Delta E ( $\Delta E$ ) < 1,5)	
<b>Traces of glue</b>	Traces of glue accepted	Traces of glue barely visible to the naked eye accepted, except on the front side (user side and close to a display)	
<b>Paint</b>		Slight differences in color or gloss may occur depending on the substrate, barely visible to the naked eye. (Gloss +/- 5%). Possible extrusion defects or impurities barely visible to the naked eye, <u>Except on the front side</u> (user side and close to a display). Internal metallization without unpainted areas of rework	
<b>Screen printing</b> <b>Digital printing</b>		Technical marking: small characters and details can sometimes lack sharpness depending on the graining of the substrate. Pantone color / screen printing CMYK colors / digital printing	
<b>Bending</b>	Bending, without requirements regarding the appearance of the heating zone (visible shrinkage or non-uniform gloss)	Angle or radius with functional control	Bending or radius respecting the angle defined according to accepted tolerances or by a template
<b>Chamfers / radii</b>	No chamfers / radii, raw cut	With chamfers on contour edges	Chamfers specific tool
<b>Machining</b>	No particular requirement	A few traces, machining imperfections or offsets barely visible to the naked eye, that do not impede mounting. Within our general tolerances	Requirements accepted beyond our general tolerances
<b>Adjustment between 2 parts</b> (ex: bottom + lid)	Deviation up to ~ 1,5mm accepted for sides measuring less than 300mm.	Deviation up to 0,7mm for sides measuring more than 300mm	Superior precision required (to be specified and validated) for sides measuring more than 300mm
As plastic material sheets are not systematically treated or protected, their appearance may include some imperfections due to the extrusion process.			