



*Our great experience in the full equipment of multitude of slitting lines allows us both to provide you with the general conditions gathered here and to supply your company with an added value, by working together with you in the design, development and improvement of your cutting toolery for every particular application.*

*There are several criterions to take into account when considering a knife. In that way, we could appoint as the first and most essential one the correct determination of the suitable material for each application, the precise and appropriate process of heat treatments and, if necessary, the suitable covering, so that it allows us to reach the optimum binomial wear resistance/toughness*



MATERIALS	THICKNESS		
	e < 1.5mm	1.5 < e < 5	5 < e
Non-ferrous alloys	HIGH CUT ULTRACUT 1	MASTER CUT 1 ó 2	MASTER CUT 1 ó 2
Cold-rolled steel	HIGH CUT ULTRA CUT 1 MASTER CUT 1		MASTER CUT 2 ó 3
Hot-rolled steel	+	MASTER CUT 1, 2 ó 3	MASTER CUT 3 ULTRA CUT 3
Stainless Steel	MASTER CUT 1 ULTRA CUT 1 ó 2	MASTER CUT 1, 2 ó 3	
Hardened Steel	++		
Magnetic steel	ULTRA CUT 1 +		

# CIRCULAR KNIVES

ALFE offers in its range:

- Medium alloyed tool steels
- High alloyed chrome steels
- High speed steels
- Covering of nitride of titanium, carbonitride of titanium, ....

As second criterion, size tolerances in the knives are of vital importance and the thinner the material to be cut is and the higher the required cutting quality, the narrower those tolerances will have to be.

ALFE, with its different finishings (grinded, lapped and superfinished) guarantees the following tolerances:

PARAMETERS	THICKNESS	STANDARD	PRECISION	SUPERPRECISION
Thickness		±0.005 mm	±0.003 mm	± 0.001 mm
Paralelism		0.005 mm	0.003 mm	0.002 mm
Roughness		0.3 Ra	0.2 Ra	0.08 Ra
Outside diameter		H 7	H 7	H 6
Inside diameter		h 7	h 7	h 6
Flatness	e < 2 mm	0.20	0.10	0.05
	2 < e < 5 mm	0.10	0.05	0.03
	5 < e < 10 mm	0.05	0.03	0.02
	10 < e	0.01	0.005	0.002

AS third criterion we should appoint that it is necessary to make a correct use of the knives, with appropriate setting-ups, careful sharpenings and meticulous cleaning, as well as the maintaining of acceptable clearances and penetrations while in use.

ALFE recommends the following general clearances and penetrations.

