

Choose the right knife for your LX610e



DTM Print offers 30°, 45° and 60° digital die cutting blades (in a set of 5 knives).

Before starting to cut with your LX610e, choose the adequate blade angle referring to the guidelines below. Depending on the type of media you'd like to cut, the different blades optimise the quality of the cut. Your LX610e cutline is only as good as the blade doing the cutting. Without a nice, clean and properly adjusted cut, the result will be a label that is difficult to peel-off.

Blade types in detail

The most common blade angles are 45° and 60°. Your LX610e includes one 45° cutting blade. Having a 60° or/and 30° blade on-hand is a good idea – you never know when the 45° cut isn't the best choice in combination to a specific label material.

The 45° blade is your all-purpose blade.

Use it as default blade for cutting media between 50.8 µm and 152.4 µm (2 – 6 mil), like DTM Paper High Gloss or DTM Poly Pearly Gloss. If the used media is too thin or thick, your cut will be imprecise.

The 30° blade has the lowest angle and therefore the least amount of blade exposed.

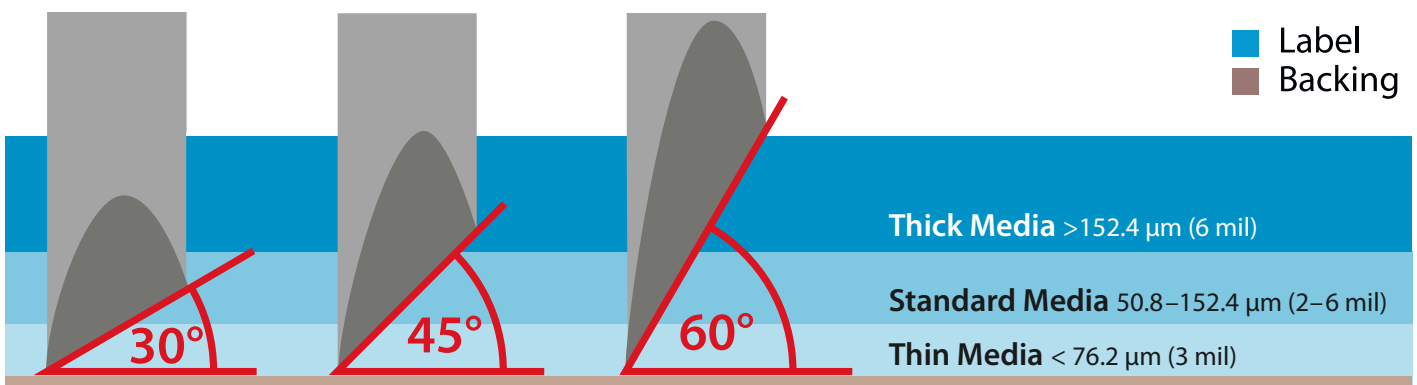
If cutting through thick media it won't be able to cut through it all the way – or if for some reason it does, it will create an imprecise, choppy/jagged cut. Use it for thin material below 76.2 µm (3 mil) like the DTM Metallic Silver Brushed or DTM Poly Silver Semi Gloss.

The 60° blade has the steepest angle, which means more cutting surface on the blade.

It is therefore the sharpest, making it ideal for cutting thicker media (such as DTM PermaTec White Matte Eco or DTM Vintage Paper Eco). Detailed cutting can also be improved with a 60° blade. If you cut thinner media, you're going to overshoot the edges.

When choosing the blade angle the goal is to select one that will cut through the face stock and adhesive, but not the liner. If the blade angle isn't steep enough, the blade can actually drag through the material and create a poor-quality cut. Inversely, using a 60° blade on everything is a waste of a blade, because not all of the blade's cutting surface is used. You will also need to change blades more frequently since the steeper angle blade will dull faster.

Blades that are too dull will result in imprecise, choppy cuts.



Which blade for which media?

All Genuine DTM Label Stock is between 80 µm – 155 µm (see table below).

As general rule of thumb please refer to these values:

30° blade for media below 76.2 µm (3 mil)

45° blade for media between 50.8 µm and 152.4 µm (2 – 6 mil)

60° blade for media thicker than 152.4 µm (6 mil)

Important Note: If you change the blade angle and knife in your cutter, you may also need to adjust the knife pressure in the PrintHub! Refer to the LX610e Manual at dtm-print.eu/manuals-read/lx610e/ section “XY Cutter Settings – Cut Offsets, Knife Pressure and Stretch Factor”. This also applies to a new inserted knife as it is likely sharper than the dull one you replaced.

Material (Material Code)	Thickness		Recommended Knife Angle		
	µm	mil	30°	45°	60°
DTM Paper High Gloss (HG)	92	3.6	–	●	–
DTM Paper High Gloss with Blockout	96	3.7	–	●	–
DTM Paper High Gloss Hot-melt (HG-HM)	95	3.7	–	●	–
DTM Paper Semi Gloss (SG)	91	3.5	–	●	–
DTM Grass Paper Eco (GPE)	128	5	–	●	○
DTM Structured Paper Gloss (SPG)	95	3.7	–	●	–
DTM Vintage Paper Eco (VP)	111	4.4	–	●	○
DTM PermaTec White Matte Eco (PTWME)	184	7.2	–	○	●
DTM Poly Clear Gloss Eco (PCGE)	95	3.7	–	●	–
DTM Poly Gold High Gloss (PGHG)	78	3	○	●	–
DTM Poly Gold HoloGram Gloss (PGHGG)	130	5.1	–	●	○
DTM Poly Pearly Gloss (PPG)	95	3.7	–	●	–
DTM Poly Silver High Gloss (PSHG)	85	3.3	○	●	–
DTM Poly Silver HoloGram Gloss (PSHGG)	72	2.8	●	○	–
DTM Poly Silver Semi Gloss (PSSG)	68	2.6	●	○	–
DTM Poly White Gloss (PWG)	86	3.3	○	●	–
DTM Poly White Matte Advanced (PWMA)	107	4.2	–	●	○
DTM Poly White Matte Eco (PWME)	108	4.2	–	●	○
DTM Poly White Matte Hot-Melt (PVMHM)	99	3.9	–	●	○
DTM Magnetic Material (M)	344	13.5	–	○	●

● = best

○ = works

– = not recommended but works, too

