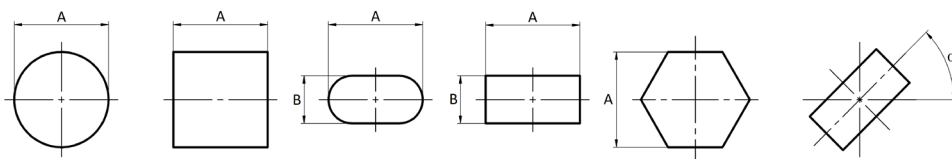


# CLUSTER TOOL

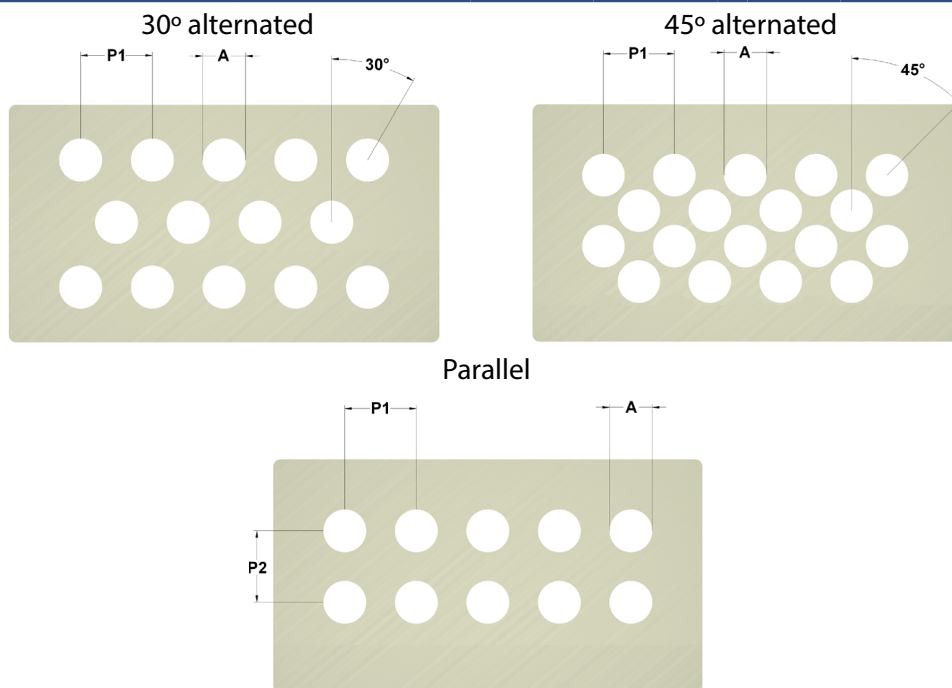
Production of repetitive punching on wide surfaces is definitely more convenient by using cluster tools, for faster performing and a better accuracy of final result.

SHAPE	DIMENSIONS	
<input type="checkbox"/> Round	A =	
<input type="checkbox"/> Square	A =	
<input type="checkbox"/> Obround	A =	B =
<input type="checkbox"/> Rectangular	A =	B =
<input type="checkbox"/> Hexagon	A =	
ORIENTATION		
<input type="checkbox"/> 0°	<input type="checkbox"/> 90°	<input type="checkbox"/> $\alpha =$
WHEELBASE		
P1 =	P2 =	
MATERIAL		
Type:		
Thickness:		
MACHINE MODEL		
REQUIRED STATION		
<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
<input type="checkbox"/> E		
HOLES LAYOUT		
<input type="checkbox"/> 30° alternated		
<input type="checkbox"/> 45° alternated		
<input type="checkbox"/> Parallel		
REQUIRED PUNCH HOLDER		
<input type="checkbox"/> No, we wish to use the following model:		
<input type="checkbox"/> Yes		

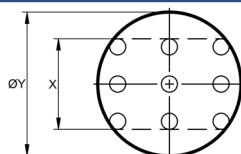
## SHAPES



## HOLES LAYOUT



## MAXIMUM SIZE PER STATION (mm)



	B	C	D	E
X	21	21	56	71
Y	31,7	50,8	88,9	114,3

## GUIDED STRIPPER

To obtain a better stability of single punches as well as a better working final result, we can use guided strippers characterized by a reduced tolerance and a shape studied expressly for this aim.

## SUGGESTIONS

To limit bending caused by multiple punching, we suggest, or it's technically compulsory, to work in nibbling as shown on the picture.

To complete the process sometimes it's necessary to use a single tool since to punch holes already performed must be absolutely avoided.

## INTEGRAL OR INTERCHANGEABLE TOOL

This particular type of tools can be manufactured either integral or with interchangeable inserts.

The integral tool is cheaper but in case of one single punch breaking, it is necessary to replace the whole tool, so we suggest small productions: interchangeable inserts allow a considerable saving on the medium use but this solution shows some limits connected to the holes distance.

