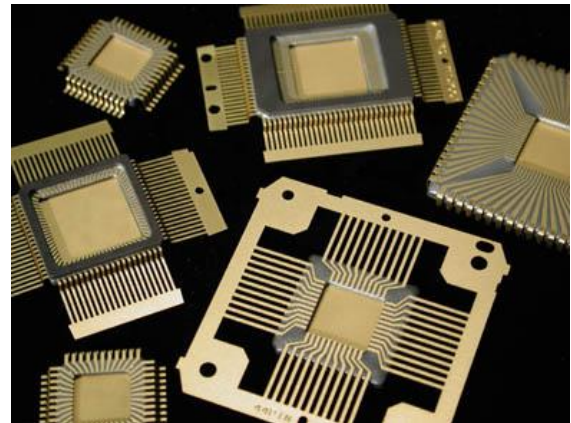
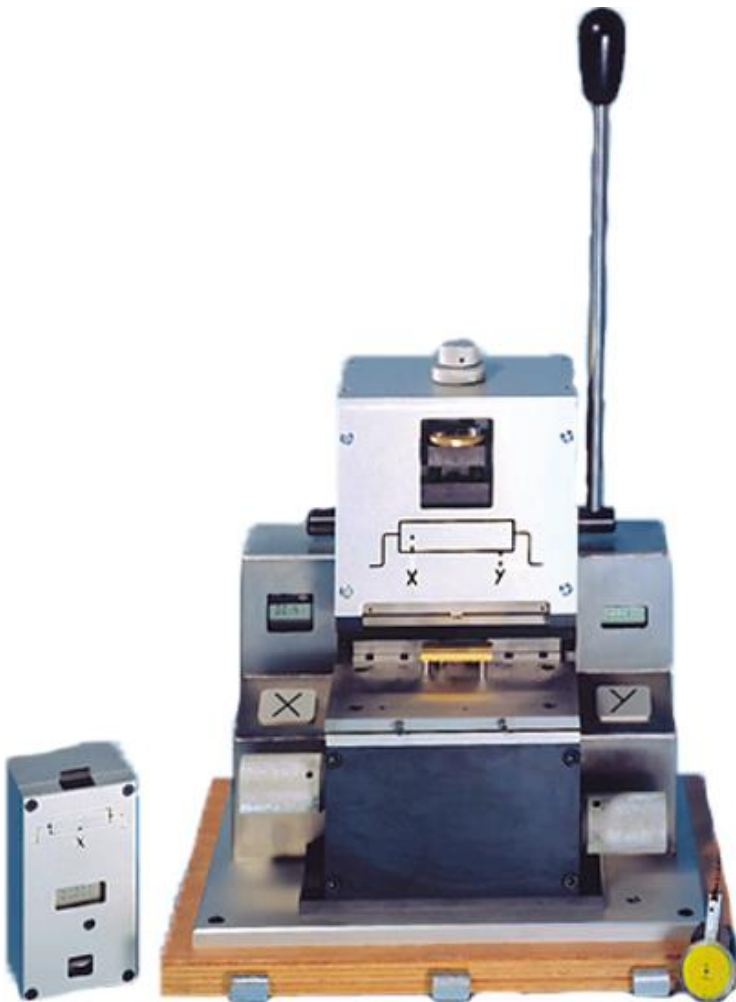


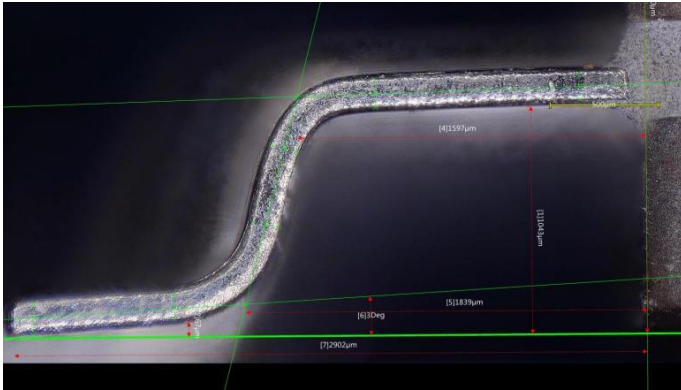
MCCH150 - Forming and cutting machine for Flat Pack Components



Machine designed to form and cut **Quad Flat Package (QFP, LQFP, TQFP, BQFP...)** as well as all the hybrid cases including fine-pitch components, one side at a time.

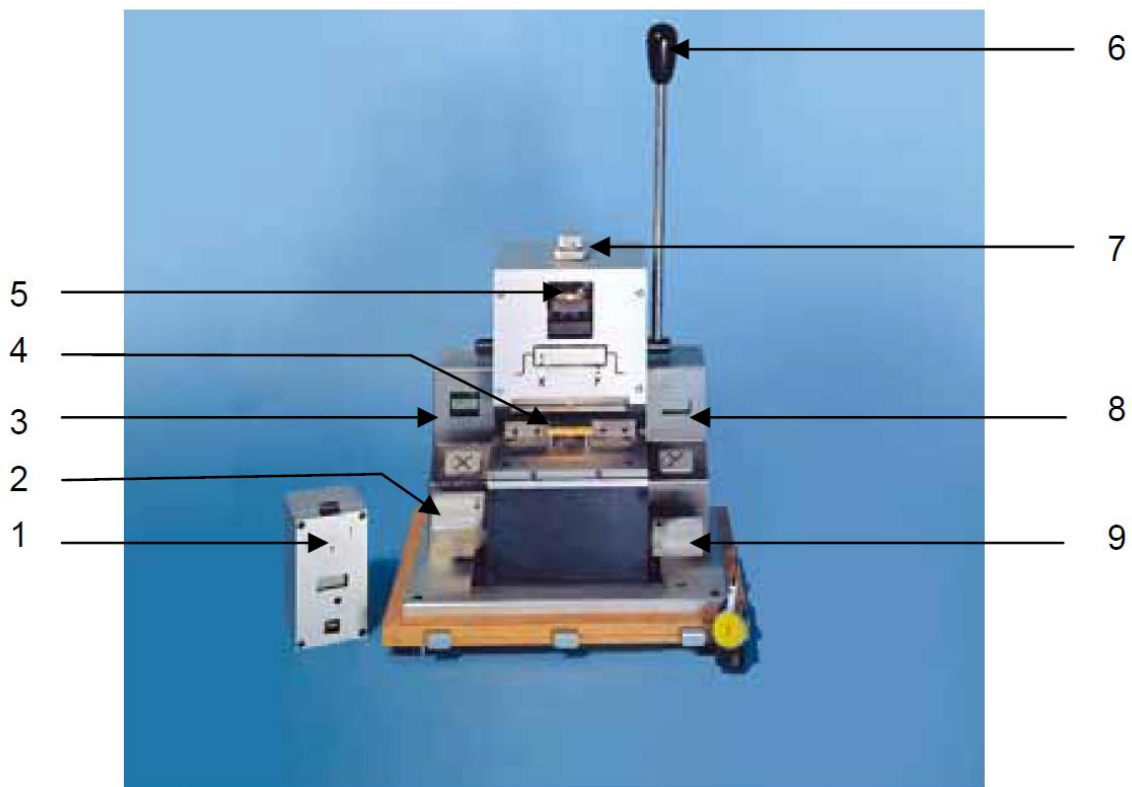
Features

- Prevents any risk of damage to the component such as lead-to-body cracks, thanks to a strong and adjustable pressure on the leads
- Easy set-up through electronic micrometers display (mm or inch)
- Overall precision within 3/100 mm
- Interchangeable dies for specific body-to-bend, footpad, lead thickness, designed and made to measure by our mechanical experts
- Adjustable parameters : leads height, stand-off, body-to-bend (with optional PMT160)
- Allows dimensions up to 149 x 149 mm
- Supplied with a dimension controller, allowing correction to component manufacturing tolerances
- Thanks to its possibilities of adjustment, the MCCH150 ensures parallelism and stability of the components on PCB
- No handling between forming and cutting, both operations are done in the same time inducing less risk of damage or lead skew to the component
- Entirely autonomous machine: no air, no electric supply



Technical data	
Forming	Side by side
Dimensions : LxWxH	350 x 300 x 350 mm
Weight	35 kg
Maximum size of components	149 x 149 mm
Contents	Forming machine Support pawn Leads dimensions sensor Level comparator PMT160 (optional)

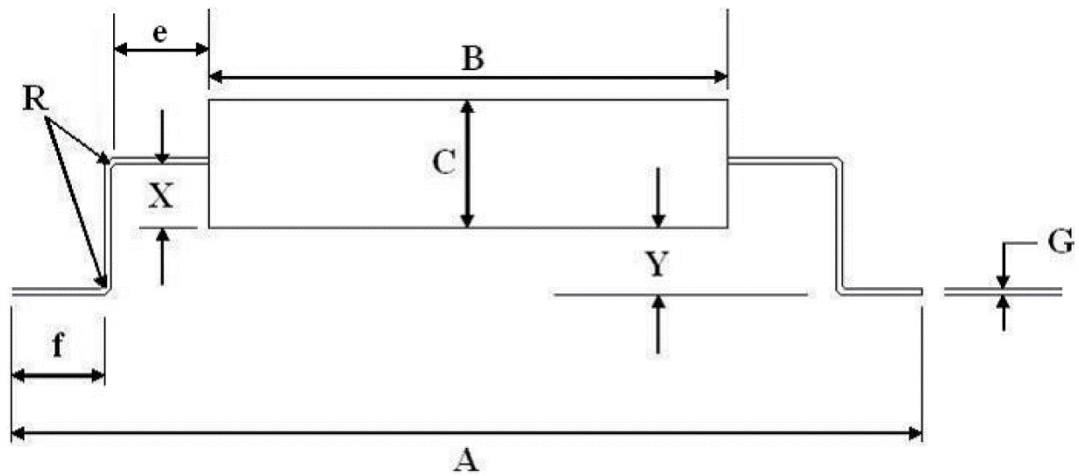
Performs state-of-the-art repeatable forming
Equips major aerospace and defence specialists in Europe and worldwide



2

Technical functions	
1	Leads sensor
2	X knurling wheel
3	X display
4	Support pawn
5	Spring pressure adjustment
6	Operation lever
7	Cutting knife switching on/off
8	Stand-off (Y) display
9	Stand-off (Y) knurling wheel

Geometrical features



Dimensions description

A : Tip to tip dimension. It will be the addition of the width of the casing and dimensions e and f (e and f resulting from the die)

B : Body width

C : Overall body thickness

e : Body-to-bend e is determined by the thickness of the forming anvil. It can be adjusted by adding a micrometric plate of translation (ref. PMT 160).

f : Footpad f is determined by the thickness of the cutting anvil.

R : Bending radius

G : Lead thickness.

X : Body thickness under leads.

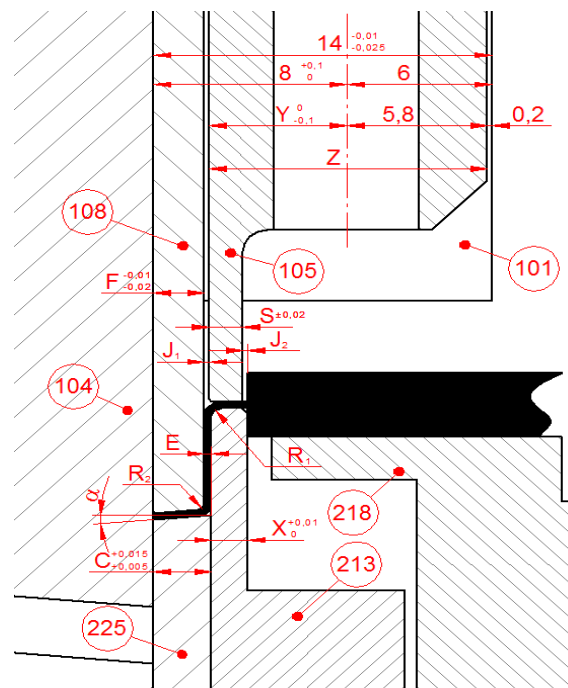
Y : Desired stand-off above PCB

Designation	Geometrical specifications	
	Minimum dimension (mm)	Maximum dimension (mm)
A	/	/
B	/	149
C	1	15
e ₂ *	0,6	2,5
f ₂	0,6	/
R	0,3	0,6
G	0,15	0,60
X	0	15
Y	0	15
	/	7°

* : see PMT160 for body-to-bend adjustment

Processing details

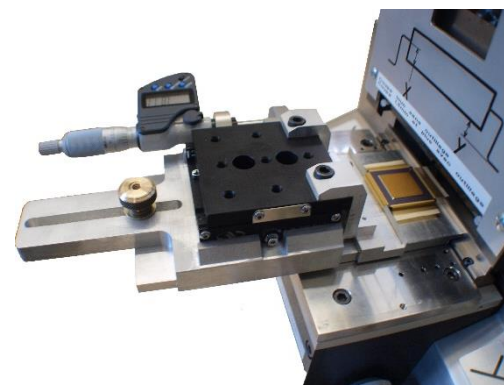
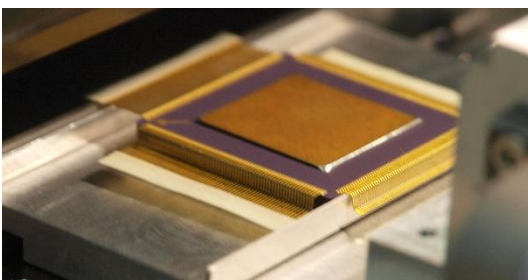
- A specific die corresponding with the desired final lay-out of component is inserted in the MCCH150. This die takes into account the following parameters :
 - Body-to-bend e
 - Footpad f
 - Angle allowing a downward contact with PCB
 - Lead thickness G
- Setting of the machine to zero using the support pawn and the level comparator
- The lead probe is used to measure X dimension, from bottom of leads to bottom of casing
- The X value is carried over to the MCCH150 micrometer. If a stand-off is necessary, e.g. in case an insulation drain is laid on the PCB, the appropriate Y value will be inserted in the second micrometer.
- Once the machine is ready, simply rest and hold the component on the pawn and use the lever to form and cut the leads.
- Cutting can be disengaged if necessary.



Mechanical lay-out

Micrometric plate of translation (PMT160)

The micrometric plate of translation enables continuous adjustment of the e value from 1,1 to 16 mm. Thus, miscellaneous components can be processed with the same die.



Ref. PMT160

Shim set

Specially designed for the MCCH150 cambering machine, this set of shims makes it possible to change the dimension e (e_1 or e_2) without having to use the PMT160 translation micrometric plate.

The principle: 2 shims fixed simply by screws on the one hand to the carriage blade and on the other hand to the forming anvil make it possible to quickly obtain an increase in the value e (Body-to-bend) of the original set of knives in place.

They make it possible to increase the dimension e by a minimum of 0.5 mm then with an increment of 0.1 mm.

They are made of reinforced steel 55 NCVD7

