

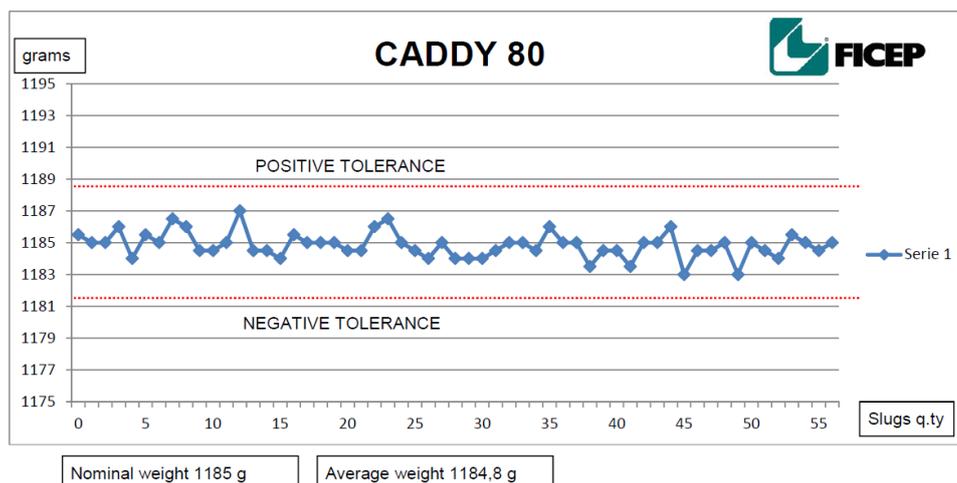
FICEP Caddy shears confirm the highest performance with the Automatic Weighing System.

FICEP, an important worldwide manufacturer of cutting system, has improved the performance of the most famous shear Caddy with new electronic components and special accessories.

The final goal, towards which the entire forging industry is striving to reduce production costs and improve the product quality, has shown the tendency to use more and more frequently closed-die forging process to eliminate flashes, with a consequent material and energy saving, and producing a near net shaped part.

The MUST for the closed die forging is to use slugs having the volume (weight) included within strict tolerances.

However, some fundamental conditions have to be met in terms of machinery, tooling and material for the slugs to be suitable for the subsequent forming process. Good shear quality and weight tolerances within $\pm 0.3\%$ can be achieved only if these requirements are fulfilled (see table).



Sheared slugs must be of constant volume, good squareness, display minimum distortion, and be devoid of shearing faults. Besides these specific shearing requirements, high output, minimum set-up time and fully automatic work-cycles are the major features of a high performance modern shearing line. The design, construction, devices and controls of FICEP Caddy shearing lines make them ideally suitable for operation under heavy duty conditions.

An important factor influences the accuracy of slug weight: the length. Fluctuations in the slug length derive far more from the rigidity of the complete length stop mechanism and from the positioning accuracy of the length stop itself. The length stop is deflected to one side when the accelerating bar strikes the tip. To prevent inaccuracies occurring as a result of this situation, the Caddy length stop

system is integrated in the frame design, providing a high degree of rigidity. In addition, a “dead time unit” ensures that the inaccuracies caused by the rebound effect of the bar are eliminated.

Only after fulfilment of the appropriate preconditions, it makes sense to equip a shearing line with a good weighing system; for the Caddy are available several weighing systems, on the basis of the degree of material supply (hot-rolled, peeled, cold-drawn, etc.), weight tolerances requested and reliability level to be obtained.

The most requested is the Automatic Weighing System: all the slugs are conveyed on the balance for a 100% weight check; the feedback of these data are analysed by the control unit and, if necessary, the gauge of the length stop system is automatically adjusted to meet the target weight; after the balance there is a discharge unit to scrap the slugs out of tolerance. In addition, it is possible to install a sequence of units for selection in different classes of weight.

FICEP Caddy Automatic Shearing Lines are based on the most advanced technology, and represent the best opportunity for any Forging Industry to be abreast of the latest developments in this particular field and also to produce high quality forgings at the most competitive costs.