

Calculation of savings

Your figures:

Calculation basis

Daily production : **1.200** holes
 Thread type : **M12 x 1,75** mm
 Material : **stainless steel**

Daily production : _____ holes
 Thread type : _____ M x _____ mm
 Material : _____

Number of revolutions by drilling

Drill diameter : \varnothing **10,5** mm
 Cutting speed : **10** m/min
 Revolutions : $\frac{10 \times 1,000}{\pi \times 10,5} =$ **303** rpm

Drill diameter : _____ \varnothing mm
 Cutting speed : _____ m/min
 Revolutions : $\frac{\quad \times 1,000}{\pi \times \quad} =$ _____ rpm

Time consumption per mm hole

Feeding : **0,1** mm/rpm
 Time consumption: $\frac{60}{303 \times 0,1} =$ **1,98** sec/mm

Feeding : _____ mm/rpm
 Time consumption: $\frac{60}{\quad \times \quad} =$ _____ sec/mm

Number of revolutions by thread cutting

Cutting speed : **10** m/min
 Thread diameter : \varnothing **12** mm
 Revolutions : $\frac{10 \times 1,000}{\pi \times 12} =$ **265** rpm

Cutting speed : _____ m/min
 Thread diameter : _____ \varnothing mm
 Revolutions : $\frac{\quad \times 1,000}{\pi \times \quad} =$ _____ rpm

Time consumption per mm thread

Pitch : **1,75** mm
 Time consumption: $\frac{60}{265 \times 1,75} \times 2 =$ **0,26** sec/mm

Pitch : _____ mm
 Time consumption: $\frac{60}{\quad \times \quad} \times 2 =$ _____ sec/mm

Unnecessary time consumption per day

Extra thread : **3** mm/hole
 Extra time consumption: $\frac{(1,98 + 0,26) \times 3 \times 1.200}{60} =$ **134,4** min/day

Extra thread : _____ mm/hole
 Extra time consumption: $\frac{(\quad + \quad) \times \quad \times \quad}{60} =$ _____ min/day

Annual savings

Machine hour cost: **50** £/h
 Working-days : **240** days/year

Machine hour cost: _____ £/h
 Working-days : _____ days/year

Savings : $\frac{134,4 \times 240 \times 50}{60} =$ **£ 26.880**

Savings : $\frac{\quad \times \quad \times \quad}{60} =$ **£ _____**

This annual saving represents a saving of 9.33 p per hole for every hole drilled and tapped.
 NB: To these figures, considerable savings due to reduced tool consumption should be added.