Carbon steel pliers specially made for cutting hairsprings. Plain and impeccable cutting.



MSA	No.	Length	Kg
11.705	17	125 mm	0.076

Carbon steel pliers for cutting hairsprings. Inclined head, anti-skid handles with 2 return springs.

Screw lap joint construction.







MSA	No.	Length	Kg
11.706	20	110 mm	0.081

Carbon steel pliers for cutting hairsprings. Straight and pointed head at both ends, anti-skid handles with 2 return springs. Screw lap joint construction.





# BAHCO® and KNIPEX® cutting pliers.



MSA	Cutting	Cutting capacity	Kg
11.228	Bevelled	Ø 1.80 mm : piano-wire Ø 5.00 mm : copper wire	0.134

Steel side cutting BAHCO® precision pliers, with large anti-skid handles and 1 return spring.

Lap joint construction.

Total length 155 mm.



MSA	Cutting	Cutting capacity	Kg
11.229	Bevelled	Ø 1.50 mm : piano-wire Ø 4.00 mm : copper wire	0.134

Heavy duty KNIPEX® end cutter with strong torque. Tempered and polished head and PVC protected handles.

Lap joint construction.

Total length 140 mm.

# SPECIAL PLIERS

# Ring cutters.



MSA	Length	Kg
11.230	160 mm	0.107

Large ring cutting pliers with chromed grooved handle. *Delivered with 1 mounted thin teeth steel circular saw.* 

### Spare part:



MSA	Item	Kg
11.230-A	Circular saw, Ø 21 mm	0.002



MSA	Length	Kg
11.198	178 mm	0.145

Steel ring cutter with PVC protected handles.

Delivered with 1 mounted thin teeth hardened steel circular saw and 1 key for saw change.

# Spare part :

MSA		Kg
11.198-A	Circular saw, Ø 30 mm	0.005



MSA	Length	Kg
11.226	120 mm	0.095

Ring cutter with knurled steel handle.

Delivered with 1 mounted thin teeth hardened steel circular saw and 1 key for saw change.







# Revolving pliers for leather holing.



MSA	Length	Kg
11.300	200 mm	0.280

Revolving pliers for leather holing with 6 punchers.

Holing Ø: 2.0 - 2.5 - 3.0 - 3.5 - 4.0 - 4.5 mm.



Holing Ø: 1.00, 1.20, 1.40, 1.60, 1.80 and 2.00



MSA	Version	Size	Kg
11.310	Complete case	270 x 225 x 80 mm	1.100
11.311	Light case	270 x 225 x 80 mm	0.970

Multiplied pliers for piercing leather straps, delivered in a case.

Composition MSA11.310, complete case:

- MSA11.310-P: 1 multiplied pliers
- MSA11.310-0x: 4 brass supports, centre-to-centre 5, 6, 7 and 8 mm
- MSA11.310-Pxxx : 6 round punches, Ø 1.00, 1.20, 1.40, 1.60, 1.80 and 2.00 mm
- MSA11.310-Gxxx: 18 round guides (3x per diameter) Ø 1.00, 1.20, 1.40, 1.60, 1.80 and 2.00 mm
- MSA11.310-CL: 1 Allen key.

Composition MSA11.311, light case:

- MSA11.310-P: 1 multiplied pliers
- MSA11.310-07 : 1 brass support, centre-to-centre 7 mm
- MSA11.310-P180 : 1 round punch, Ø 1.80 mm
- MSA11.310-G180 : 3 round guides  $\varnothing$  1.80 mm
- MSA11.310-CL : 1 Allen key.





# Spare parts:

MSA		Kg
11.310-05	Brass support, centre-to-centre 5 mm	0.038
11.310-06	(1) Brass support, centre-to-centre 6 mm	0.038
11.310-07	Brass support, centre-to-centre 7 mm	0.038
11.310-08	Brass support, centre-to-centre 8 mm	0.038
11.310-G100	(2) Round guide, Ø 1.00 mm	0.001
11.310-G120	Round guide, Ø 1.20 mm	0.001
11.310-G140	Round guide, Ø 1.40 mm	0.001
11.310-G160	Round guide, Ø 1.60 mm	0.001
11.310-G180	Round guide, Ø 1.80 mm	0.001
11.310-G200	Round guide, Ø 2.00 mm	0.001
11.310-P	Pliers alone, 210 x 110 x 45 mm	0.455
11.310-P100	(3) Round punch, Ø 1.00 mm	0.001
11.310-P120	Round punch, Ø 1.20 mm	0.001
11.310-P140	Round punch, Ø 1.40 mm	0.001
11.310-P160	Round punch, Ø 1.60 mm	0.001
11.310-P180	Round punch, Ø 1.80 mm	0.001
11.310-P200	Round punch, Ø 2.00 mm	0.001