

# Catalog



# RAINER RAINER RAINER RAINER RAINER

## WHY SUCE?



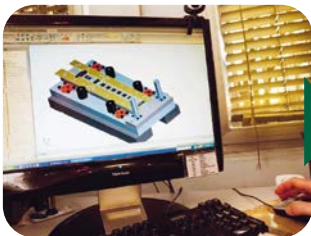
The use of double grinding wheel plants allows for a very low roughness coefficient.



The machine tooling dept. includes automatic lines of turning with load bars and milling machines.



10,000 items available in stock divided into 20 different categories



Thanks to our project department, with 3D CAD stations, we are able to design both standard and special tools.



No shape limitation thanks to EDM technology.



The use of the best steel available on the market by SUCE tools ensures a high standard quality and a long tool life.





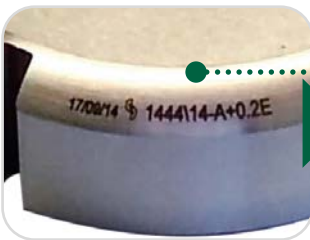
No shape limitation thanks to Wire EDM technology.



Wire EDM load-unload cell.



In warehouse: ready for delivery.

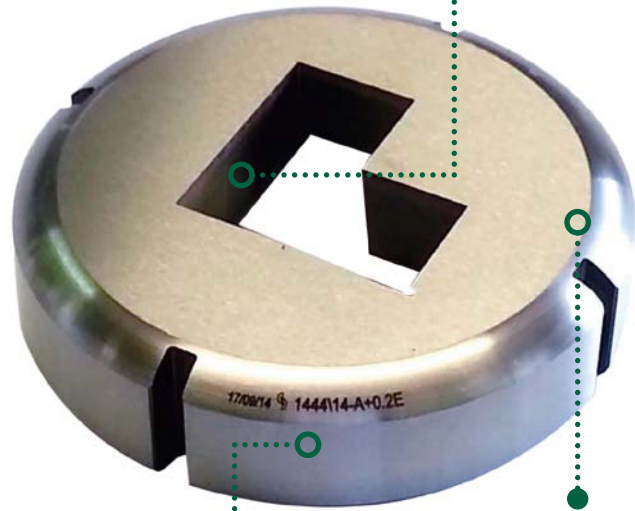
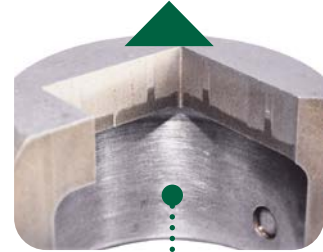


SUCE special ID number.



Manufacturing execution system.

Different lock-slug systems available



Tool testing: fault free.

**DIE CLEARANCE**

Die clearance is the total space between the die and the punch.

A correct clearance between the punch and the die ensures normal wear of the tool and punching without defects such as: burrs caused by excessive clearance and premature wearing of the tool and increased punching force in the case of clearance being too small.

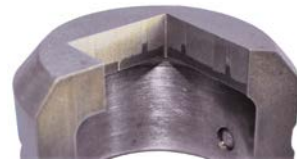
MATERIAL				
Thickness mm	Mild steel 16-20%	Stainless steel 18-24%	Aluminum 12-16%	Copper 10-14%
0.5 – 0.6	0.08-0.1	0.1- 0.12	0.06 – 0.08	0.05 – 0.06
0.8	0.14 – 0.16	0.15 – 0.2	0.1 – 0.14	0.08 – 0.1
1	0.16 – 0.2	0.18 – 0.24	0.12 – 0.16	0.1 – 0.14
1.2	0.2 – 0.24	0.24 – 0.3	0.15 – 0.2	0.12 – 0.15
1.5	0.25 – 0.3	0.27 – 0.35	0.18 – 0.24	0.15 – 0.2
2	0.34 – 0.4	0.36 – 0.45	0.24 – 0.3	0.2 – 0.25
2.5	0.45 – 0.5	0.45 – 0.55	0.32 – 0.35	0.25 – 0.3
3	0.5 – 0.6	0.6 – 0.7	0.35 -0.45	0.3 – 0.4
4	0.65 – 0.8	0.7 – 0.95	0.45 – 0.6	0.4 – 0.55
5	0.85 – 1	0.9 – 1.15	0.6 – 0.8	0.55 – 0.65
6	0.95 – 1.2	1.1 – 1.4	0.75 – 0.95	0.7 – 0.85

*In case of blanking mild steel and stainless steel, clearance is 15% of material thickness.*

*In case of blanking aluminum and copper clearance is 10% of material thickness.*



System E :3 cuts with different angles ensures the locking of the slug.



Lock slug **AS** best option when thickness > 3 mm.

**DIES LOCK SLUG**

SUCE lock slug dies eliminate slug pulling. Slug pulling occurs when the slug returns to the top of the sheet during the stripping portion of the punching cycle. Because of this the slug comes between the punch and the top of the sheet on the next cycle, causing damage to the part and the tooling. How to avoid this problem?

The SUCE NO-SLUG has been designed with a reduction point of the shape below the surface so the slug cannot return once it passes through this point.

Once the slug is separated from the punch, it is free to fall through the die. Slug pulling is eliminated.

This solution isn't suggested with slug exhaust system machines ; AS lock slug design with protrusions is best solution with thickness more than 3 mm, minimum cl for AS system is 0.15 mm.

SUCE Lock slug E and A system is a standard for all Suce dies, AS is on request, reduced land is a standard for thick turret dies rt80x5 rt80x6 rt110x5 rt110x6.



lock slug AS best opt. th>3 mm



lock slug E thick turret B,C,D,E



lock slug A thick turret A



straight and conic blank die



reduced land slitting die



conic trumpf style

## TOOLS SHARPENING

Before starting, make sure that punch and die cutting edge are in perfect condition. Accurate maintenance of the tools guarantees a normal wearing and the result of punching will be without residual burr and defects. Regular sharpening of the 0.1 mm punch and 0.2 mm die guarantees a constant life time of tooling.

It is preferable that grinding operation is made with tangential grinding machine with adequate cooling in order to avoid tool tempering; after grinding it is necessary to demagnetize the tools with an appropriate demagnetizer. If a urethane ejectors is applied, restore the initial hole depth in such a way that the ejector can be compressed.

## PUNCHING FORCE

Before starting ensure that punching force doesn't exceed the capacity of punching machine. In order to calculate the punching force in kg, use the following formula:

**Perimeter of the shape (mm) x thickness (mm) x 4/5 x shear strength \***

\* mild steel 40 - 50 kg/mm<sup>2</sup> stainless steel 60 - 70 kg/mm<sup>2</sup> aluminium 20 - 25 kg/mm<sup>2</sup>

A sharpening other than the flat one reduces both punching stress and punching noise. Therefore to ascertain the true punching force, multiply the pressure calculated using the above formula by the **sharpening factor**:

Sharpening height	Thickness (mm)					
	1 - 1.5	2	3	4	5	6
mm						
1	0.75	0.9	1	1	1	1
1.5*	0.5	0.6	0.7	0.95	1	1
3**	0.5	0.5	0.5	0.6	0.7	0.75

\* standard shear height thick turret style

\*\* standard shear height Trumpf style



**Double valley**  
Cod 3P



Best option when shape is long, but susceptible to breakage



**Roof top**  
Cod V



Best option when punching force is high, punching surface 75%



**Inverted roof top**  
Cod VR



Best option for nibbling but inverted stresses could cause breakage



**Whisper**  
Cod W



Recommended only for blanking (turret machine)

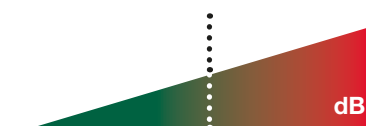


**Four ways**  
Cod 4P



Recommended for round and square

**PUNCHES ARE FLAT, ABOVE SHEAR ARE AVAILABLE UPON REQUEST; EACH TYPE OF SHARPENING REDUCES NOISE UP TO 50%**





**COATING**

**PROBUS**

The TiCN coating (Titanium Carbonitride) comes from an evolutionary study of the precursor TiN (Titanium Nitride), inheriting the already appreciated qualities and also some of its features. Indeed, thanks to the introduction of the C (Carbon) within the layer, it was possible to obtain a structure that provides a hardness greater than about 50% compared to that of TiN. In consequence to this, the TiCN coating ensures a higher wear resistance while retaining excellent toughness which makes it ideal when applied to tools for interrupted cutting. A further improvement of the TiCN was achieved by developing a “multilayer” (multi-layer) structure composed of several hundreds of layers that give better control of structural stress within the coating.



STRUCTURE	Micro Hardness (HV 0.05)	Friction coefficient (100 cr6)	Thickness (micron)	Deposition temperature (°C)	Max temperature (max°C)	Colour
Multilayer	3.500	0.5	2 - 4	350 - 480	350	Blu/Grey

**GEMINUS**

The double coating is obtained by overlaying the traditional Probus with Movic self-lubricating coating. The Probus coating comes from an evolutionary study of the precursor TiN, inheriting the already appreciated qualities and improving some of its features. In fact, thanks to the introduction of the Carbon (C) within the layer, it was possible to obtain a structure that has a hardness greater than 50% compared to that of TiN.

In consequence to this, the Probus coating ensures a higher wear resistance.

A further improvement of the Probus was achieved by developing a “multilayer” (multi-layer) composed of several hundreds of different layers that give better control of structural stress within the coating. MOVIC is a self-lubricating and anti-adhesive coating based on MoS2 (Molybdenum), which is produced by PVD sputtering Magnetron technology. MOVIC has been developed in the aerospace to find alternatives to traditional oils (eg oil, grease) when their use is not permitted and it has shown excellent tribological features that made it very interesting for a variety of new applications.

STRUCTURE	Micro Hardness (HV 0.05)	Friction coefficient (100 cr6)	Thickness (micron)	Deposition temperature (°C)	Max temperature (max°C)	Colour
Single layer	-	<0.1	1	<150	-	GREY

BASIC COMPOSITION	Coating Structure	Microhardness (HV 0.05)	Coefficient of friction against (100 cr6)	µm thickness (microns)	Deposition Temperature (°C)	Max Temperature of use (max ° C)	Colour
Titanium carbonitride	Multilayer	3.500	0,5	1- 3	350 - 480	350	Pink

**LEVATUS**

DLC is an innovative carbon-based coating with wide spectrum of application which allows you to deal with problems related to abrasion, to chemical attack and sliding.

The low deposition temperature , the hardness and the low coefficient of friction make it of extreme interest. It is applied on finished parts while maintaining the state of the surface finishing.

The DLC is deposited by the PA-CVD (Plasma Assisted – Chemical Vapour Deposition) technology which allows to maintain low temperature of depositing and at the same time ensures an excellent adhesion.



BASIC COMPOSITION	Deposition Technology	Microhardness (HV 0.05)	Coefficient of friction against 100 Cr 6	µm thickness (microns)	Deposition Temperature (°C)	Max Temperature of use (max ° C)	Colour
a-C:H sp2-sp3	PA-CVD	1.500 - 3.000	0,05 - 0,1	0,5 - 3	250	350	Black

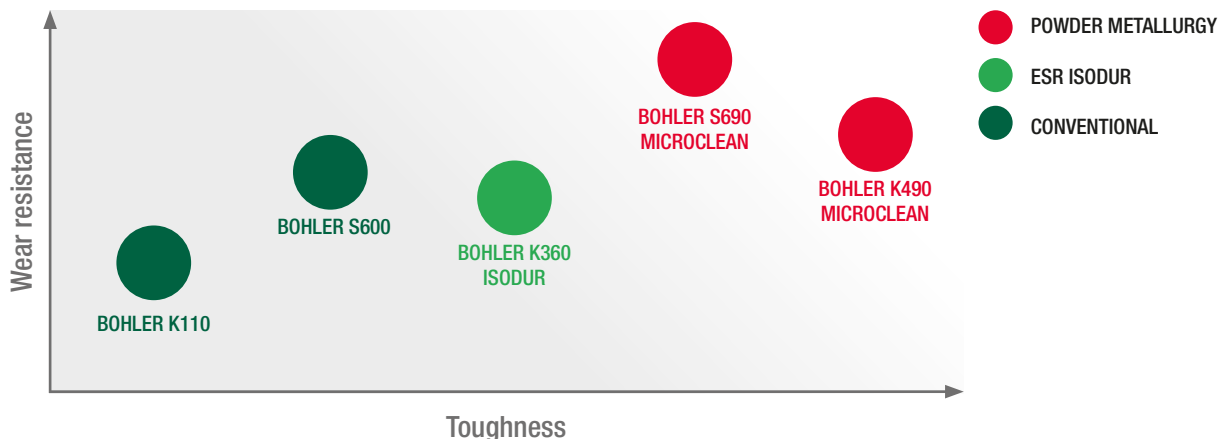
COATING	COPPER	ALUMINUM	MILD STEEL	GALVANIZED STEEL	STAINLESS STEEL
Probus	X	X	X	XX	XXX
GEMINUS	XX	XX	X	XXX	XX
LEVATUS	XXX	XXX	X	X	X

NEEDLESS	RECOMMENDED	HIGHLY RECOMMENDED
X	XX	XXX

## BEST TOOLS CAN ONLY BE FORMED OUT OF THE BEST STEEL

Tool users has been demanding higher and higher standards of their tools to prolong service life and reduce costs; the tool material itself, in addition to the tool design, is a success factor which is often under-appreciated. It can significantly influence the tool life and therefore the cost effectiveness of your production.

For each of the demands of blanking and cutting, Bohler has an optimal solution in its product range. The range contains everything from standard materials to high-performance powder metallurgical steels.



### HSS - S600

M2 is the “standard” and most widely used industrial HSS. It has small and evenly distributed carbides giving high wear resistance, Tungsten-alloyed molybdenum high-speed steel with high hardness excellent cutting properties, outstanding compressive strength and good toughness.

#### S600 Chemical composition

CARBONIUM	CHROMIUM	MOLYBDENUM	VANADIUM	TUNGSTEN
0.90 %	4,10 %	5.0 %	1,80 %	3.50 %

### STEELFORMA

Il FormaSteel One è prodotto con metodi tradizionali di ultima generazione per un ottimo FormaSteel One is a tool steel that presents as characteristics an excellent combination of wear resistance, chipping resistance and toughness. It is the ideal solution in all those applications that require greater resistance to wear and / or greater toughness than 1.2379 (Aisi D2) and compared to steel quick.

The combination of wear resistance, compressive strength and toughness means that Steel One has a wide variety of uses in applications such as molds for cold deformation, cutting blades and rollers.

#### Steelforma Chemical composition

CARBONIUM	CHROMIUM	MOLYBDENUM	VANADIUM	TUNGSTEN
1.1 %	8.0 %	1.6 %	2.4 %	1.2 %

### D2 – K110

K110 is a high-carbon, high-chromium tool steel alloyed with molybdenum and vanadium characterized by: High abrasive wear resistance, High compressive strength, Good through-hardening properties, High stability in hardening and good resistance to tempering-back.

D2 steel is an air hardening, high-carbon, high-chromium tool steel. It has high wear and abrasion resistant properties. It is heat treatable and will offer a hardness in the range 59-62 HRC

#### D2 K110 Chemical composition

CARBONIUM	CHROMIUM	MOLYBDENUM	SILICIUM	VANADIUM	MANGANESE
1.55 %	11.30 %	0.75 %	0.30%	0,75 %	0.30 %

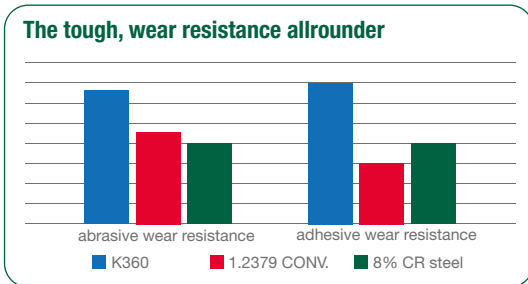
ISODUR

A tough, "LONG DISTANCE RUNNER" with an optimum chemical composition

**ESR electro slug remelting:** a tried and tested remelting technology developed by Bohler gives the material the homogeneity it needs. A prerequisite for the best performance. ESR Manufacture improved service life due:

- Least possible inclusion content
- Lower micro and macro segregation
- Good homogeneity and higher degree of purity
- A homogeneous structure throughout the entire cross-section and bar length
- Producing larger bar dimensions at a constant carbide distribution
- Uniform correction of dimensions
- A broad range of application due to a high degree of toughness

K360 Chemical composition	
Carbonium	1.25 %
Chromium	8.75 %
Molybdenum	2.70 %
Vanadium	1.18 %

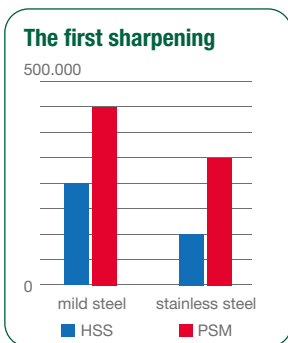


The new K360 isodur is a further development of the 8% chromium steels and has been developed to meet the needs of customers now more than ever. High toughness and, a remarkably high compressive strength, together with good resistance make this steel a real problem solver. This steel is particularly outstanding when adhesive and abrasive wear resistance are necessary; it allows a considerable increase in performance, your productivity will increase and your costs per part will be reduced.

POWDER STEEL METALLURGY

Today Suce provides, in addition to the traditional HSS punches, of new variety of tools, Trumpf style and Thick turret style made in powder steel metallurgical.

<b>HIGHEST METALLURGICAL PURITY</b>	<b>GOOD DIMENSIONAL STABILITY</b>	<b>FINEST CARBIDE DISTRIBUTION</b>	<b>HIGH DEGREE OF HARDNESS</b>	<b>MAXIMUM WEAR RESISTANCE</b>	<b>HIGHER TOUGHNESS</b>	<b>HIGH COMPRESSIVE STRENGTH</b>



Graphic shows nr of hits before first sharpening punching mild and stainless steel with HSS and PSM tool. Tool tested square 6mm

One of them is **K490**. Research shows that the **K490 Microclean**, thanks to its chemical composition, is the best steel in the punching market. If you compare it with other powder steels, for example M4 and PM23, you will find that it assures twice the toughness with the same wear resistance.

- This new material is characterized by:
- **A high adhesive and abrasive wear resistance** More hits between regrind operations increases tool life, wear resistance double than traditional HSS M2
  - **A high toughness** reduces risk of breaking the punch.

K490 Chemical composition	
Carbonium	1.40 %
Chromium	6.40 %
Molybdenum	1.50 %
Vanadium	3.70 %
Tungsten	3.50 %

CPOH plus Chemical composition	
Carbonium	1.0 %
Chromium	8.0 %
Molybdenum	2.50 %
Vanadium	0.3 %

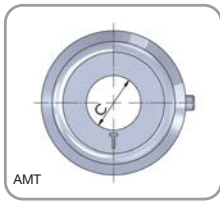
In the catalogue **POWDER STEEL PUNCHES** are marked in **RED**, available items:

Trumpf Gr0 D6 D10.5	Trumpf Multitool 5 - 10	Trumpf Gr1	Thick turret Mate ultra style	Thick turret Smart staz.A Wilson	B station Smart, Mate Wilson	Trumpf blade Thick turret Slitting blade



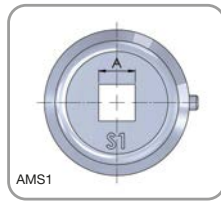


## ROUND AND STANDARD



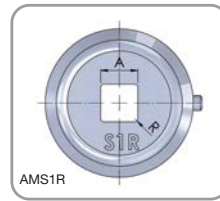
AMT

C: \_\_\_\_\_



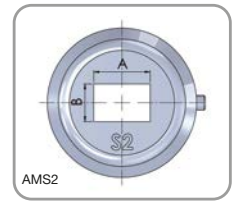
AMS1

A: \_\_\_\_\_



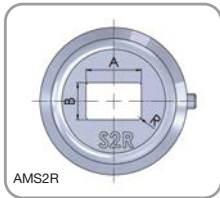
AMS1R

A: \_\_\_\_\_ R: \_\_\_\_\_



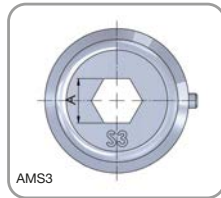
AMS2

A: \_\_\_\_\_ B: \_\_\_\_\_



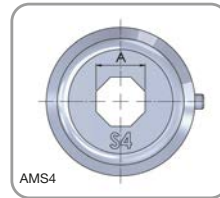
AMS2R

A: \_\_\_\_\_ B: \_\_\_\_\_  
R: \_\_\_\_\_



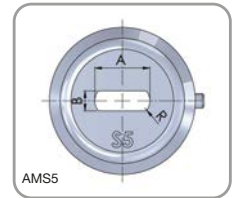
AMS3

A: \_\_\_\_\_



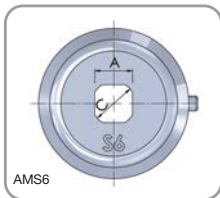
AMS4

A: \_\_\_\_\_



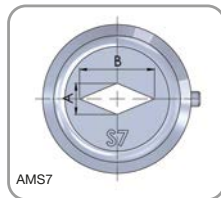
AMS5

A: \_\_\_\_\_ B: \_\_\_\_\_  
R: \_\_\_\_\_



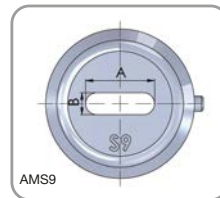
AMS6

A: \_\_\_\_\_ C: \_\_\_\_\_



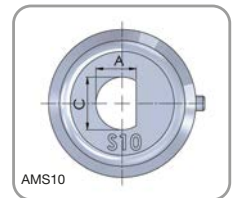
AMS7

A: \_\_\_\_\_ B: \_\_\_\_\_



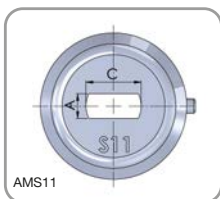
AMS9

A: \_\_\_\_\_ B: \_\_\_\_\_



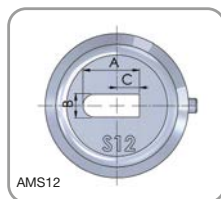
AMS10

A: \_\_\_\_\_ C: \_\_\_\_\_



AMS11

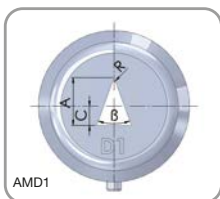
A: \_\_\_\_\_ C: \_\_\_\_\_



AMS12

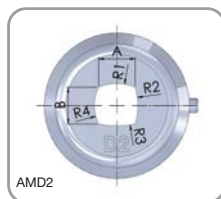
A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_

## SPECIAL 1



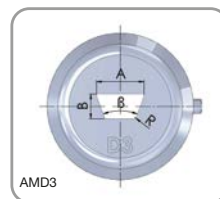
AMD1

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_ R: \_\_\_\_\_



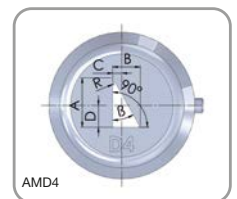
AMD2

A: \_\_\_\_\_ B: \_\_\_\_\_  
R1: \_\_\_\_\_ R2: \_\_\_\_\_  
R3: \_\_\_\_\_ R4: \_\_\_\_\_



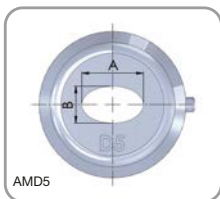
AMD3

A: \_\_\_\_\_ B: \_\_\_\_\_  
B: \_\_\_\_\_ R: \_\_\_\_\_



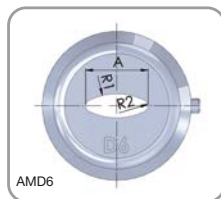
AMD4

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_ D: \_\_\_\_\_  
B: \_\_\_\_\_ R: \_\_\_\_\_



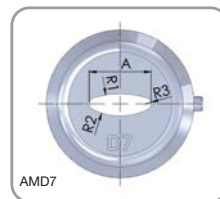
AMD5

A: \_\_\_\_\_ B: \_\_\_\_\_



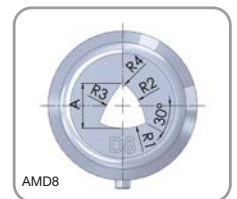
AMD6

A: \_\_\_\_\_ R1: \_\_\_\_\_  
R2: \_\_\_\_\_



AMD7

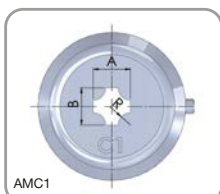
A: \_\_\_\_\_ R1: \_\_\_\_\_  
R2: \_\_\_\_\_ R3: \_\_\_\_\_



AMD8

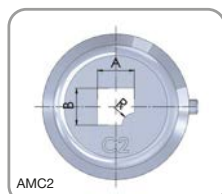
A: \_\_\_\_\_ R1: \_\_\_\_\_  
R2: \_\_\_\_\_ R3: \_\_\_\_\_  
R4: \_\_\_\_\_





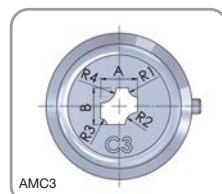
AMC1

A: \_\_\_\_\_ B: \_\_\_\_\_  
R: \_\_\_\_\_



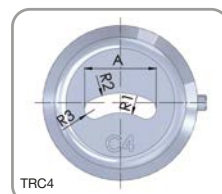
AMC2

A: \_\_\_\_\_ B: \_\_\_\_\_  
R: \_\_\_\_\_



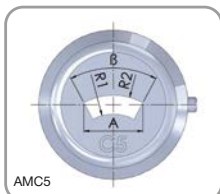
AMC3

A: \_\_\_\_\_ B: \_\_\_\_\_  
R1: \_\_\_\_\_ R2: \_\_\_\_\_  
R3: \_\_\_\_\_ R4: \_\_\_\_\_



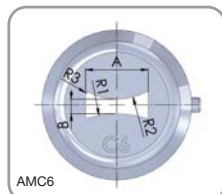
TRC4

A: \_\_\_\_\_ R1: \_\_\_\_\_  
R2: \_\_\_\_\_ R3: \_\_\_\_\_



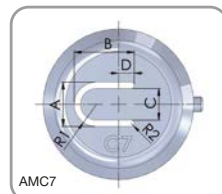
AMC5

A: \_\_\_\_\_ B: \_\_\_\_\_  
R1: \_\_\_\_\_ R2: \_\_\_\_\_



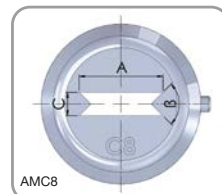
AMC6

A: \_\_\_\_\_ B: \_\_\_\_\_  
R1: \_\_\_\_\_ R2: \_\_\_\_\_  
R3: \_\_\_\_\_



AMC7

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_ D: \_\_\_\_\_  
R1: \_\_\_\_\_ R2: \_\_\_\_\_

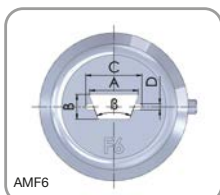


AMC8

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_

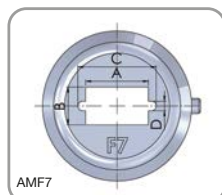
**Note:**  
R<3 price is SPECIAL 2

SPECIAL 2



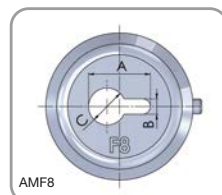
AMF6

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_ D: \_\_\_\_\_  
B: \_\_\_\_\_



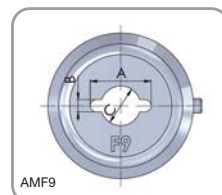
AMF7

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_ D: \_\_\_\_\_



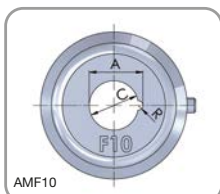
AMF8

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_



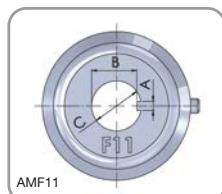
AMF9

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_



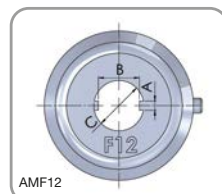
AMF10

A: \_\_\_\_\_ C: \_\_\_\_\_  
R: \_\_\_\_\_



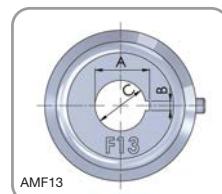
AMF11

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_



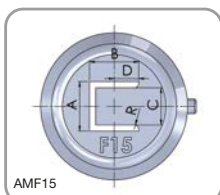
AMF12

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_



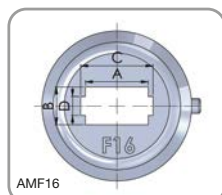
AMF13

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_



AMF15

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_ D: \_\_\_\_\_  
R: \_\_\_\_\_



AMF16

A: \_\_\_\_\_ B: \_\_\_\_\_  
C: \_\_\_\_\_ D: \_\_\_\_\_

**A STATION ECONO LINE, SOLID GUIDE**

PUNCH  
Punzone



PUNCH ASSEMBLY  
Punzone assemblato



DIE  
Matrice



ITEM	PUNCH Punzone	€	PUNCH ASSEMBLY Punzone assemblato	€	DIE HWS Matrice HWS	€	DIE ISODUR Matrice ISODUR	€
ROUND	AMA1PUT006T		AMA1PARE06T		AMA1MAT001T		AMA1MAT006T	
STANDARD	AMA1PUT006S		AMA1PARE06S		AMA1MAT001S		AMA1MAT006S	

**FITTING**



ITEM	HEAD Testa	€	SPRING Gruppo molle	€	OR COLLAR Ghiera inferiore	€	STANDARD GUIDE Guida standard	€
	RNA0CNTET0		AMA1MST0		AMA1RIT0		ROUND AMA1GUT0T	
							SHAPE 0-90° AMA1GUT0S	
							SQUARE 0-135° AMA1GUT0Q	

**A STATION SMART2**

Max 12.70 mm, Max thickness: max 3 mm  
Grinding life mm: Punch 6, Die 2.5



PUNCH Punzone



PUNCH ASSEMBLY  
Punzone assemblato



STRIPPER Estrattore



ITEM	PUNCH Punzone				PUNCH ASSEMBLY Punzone assemblato				STRIPPER Estrattore	
	HP	€	PSM	€	HP	€	PSM	€		€
ROUND	AMA1IPTM06T		AMA1IPTM04T		AMA1PATUR6T		AMA1PATUR4T		AMA1PLTUT	
STANDARD	AMA1IPTM06S		AMA1IPTM04S		AMA1PATUR6S		AMA1PATUR4S		AMA1PLTUS	
SPECIAL 0	AMA1IPTM06C		AMA1IPTM04C		AMA1PATUR6C		AMA1PATUR4C		AMA1PLTUD	
SPECIAL 1	AMA1IPTM06D		AMA1IPTM04D		AMA1PATUR6D		AMA1PATUR4D		AMA1PLTUD	
SPECIAL 2	AMA1IPTM06F		AMA1IPTM04F		AMA1PATUR6F		AMA1PATUR4F		AMA1PLTUD	

**FITTING**



ITEM	SMART PRE-LOADED PACK SPRING Gruppo molle precaricato tipo SMART (max thickness 3 mm)	€	SMART OPEN GUIDE Guida aperta tipo SMART	€
	AMA1LLTMRN		ONLY ROUND AMA1GUTUT	
			SHAPE 0-90-135° AMA1GUTUS	

## A STATION STANDARD, OPEN GUIDE

Max 12.70 mm,  
 Max thickness: max 3 mm  
 Grinding life mm:  
 Std punch 2.5,  
 Long life punch 6,  
 Die 2.5



ITEM	PUNCH Punzone	€	PUNCH ASSEMBLY Punzone assiemato	€	PUNCH ASSEMBLY LONG LIFE Punzone assiemato recupero affilatura	€	STRIPPER Estrattore	€	HWS DIE Matrice HWS	€	ISODUR DIE Matrice ISODUR	€
ROUND / Diametro	AMA1PUT006T		AMA1PATR306T		AMA1PALTR306T		AMA1PLTMT		AMA1MAT001T		AMA1MAT006T	
STANDARD	AMA1PUT006S		AMA1PATR306S		AMA1PALTR306S		AMA1PLTMS		AMA1MAT001S		AMA1MAT006S	
SPECIAL 0	AMA1PUT006C		AMA1PATR306C		AMA1PALTR306C		AMA1PLTMD		AMA1MAT001D		AMA1MAT006D	
SPECIAL 1	AMA1PUT006D		AMA1PATR306D		AMA1PALTR306D		AMA1PLTMD		AMA1MAT001D		AMA1MAT006D	
SPECIAL 2	AMA1PUT006F		AMA1PATR306F		AMA1PALTR306F		AMA1PLTMD		AMA1MAT001D		AMA1MAT006D	

## FITTING



ITEM	PRELOADED PACK SPRING	€	HEAD Testa	€	SPRING Molla	€	OR COLLAR Ghiera inferiore	€	STANDARD GUIDE Guida standard	€
	AMA1LGIOTR		RNA0CNTETO		AMA1MST0		AMA1RIRA		ROUND AMA1GUA2T	
									SHAPE 0-90° -135° AMA1GUL2S	



**A STATION SMART**

Max 12.70 mm, Max thickness: max 3 mm  
Grinding life mm: Punch 6, Die 2.5



PUNCH Punzone



PUNCH ASSEMBLY  
Punzone assemblato



STRIPPER Estrattore



ITEM	PUNCH Punzone				PUNCH ASSEMBLY Punzone assemblato				STRIPPER Estrattore	
	HP	€	PSM	€	HP	€	PSM	€		€
ROUND	AMA1IP16T06T		AMA1IP16T04T		AMA1PANSTR06T		AMA1PANSTR04T		AMA1PLTMT	
STANDARD	AMA1IP16T06S		AMA1IP16T04S		AMA1PANSTR06S		AMA1PANSTR04S		AMA1PLTMS	
SPECIAL 0	AMA1IP16T06C		AMA1IP16T04C		AMA1PANSTR06C		AMA1PANSTR04C		AMA1PLTMD	
SPECIAL 1	AMA1IP16T06D		AMA1IP16T04D		AMA1PANSTR06D		AMA1PANSTR04D		AMA1PLTMD	
SPECIAL 2	AMA1IP16T06F		AMA1IP16T04F		AMA1PANSTR06F		AMA1PANSTR04F		AMA1PLTMD	

**FITTING**

SMART PRE-LOADED



SMART OPEN GUIDE



ITEM	SMART PRE-LOADED PACK SPRING Gruppo molle precaricato tipo SMART (max thickness 3 mm)	€	SMART OPEN GUIDE Guida aperta tipo SMART	€
	RNA1LLNS		ONLY ROUND AMA1GUT2T	
			SHAPE 0-90-135° AMA1GUT2S	

**CAT 251**

Max 22 mm

PUNCH HSS  
Punzone HSS



STRIPPER  
Estrattore



GUIDE COMPLETE  
Guida completa



DIE Ø 34  
Matrice Ø 34



ITEM	PUNCH HSS Punzone HSS	€	STRIPPER Estrattore	€	GUIDE COMPLETE Guida completa	€	DIE HWS Matrice HWS	€
ROUND	RNB1PUCN06T		RNB1PLCNT		RNB1GACNT		RNB1MACN01T	
STANDARD	RNB1PUCN06S		RNB1PLCNS		RNB1GACNS		RNB1MACN01S	
SPECIAL 0	RNB1PUCN06C		RNB1PLCND		RNB1GACNS		RNB1MACN01D	
SPECIAL 1	RNB1PUCN06D		RNB1PLCND		RNB1GACNS		RNB1MACN01D	
SPECIAL 2	RNB1PUCN06F		RNB1PLCND		RNB1GACNS		RNB1MACN01D	

### CAT 252

Max 34 mm

PUNCH HSS  
Punzone HSS



STRIPPER  
Estrattore



GUIDE COMPLETE  
Guida completa



DIE Ø 56  
Matrice Ø 56



ITEM	PUNCH HSS Punzone HSS	€	STRIPPER Estrattore	€	GUIDE COMPLETE Guida completa	€	DIE HWS Matrice HWS	€
ROUND	RNC1PUCN06T		RNC1PLCNT		RNC1GACNT		RNC1MACN01T	
STANDARD	RNC1PUCN06S		RNC1PLCNS		RNC1GACNS		RNC1MACN01S	
SPECIAL 0	RNC1PUCN06C		RNC1PLCND		RNC1GACNS		RNC1MACN01D	
SPECIAL 1	RNC1PUCN06D		RNC1PLCND		RNC1GACNS		RNC1MACN01D	
SPECIAL 2	RNC1PUCN06F		RNC1PLCND		RNC1GACNS		RNC1MACN01D	

### CAT 253

Max 60 mm

PUNCH HSS  
Punzone HSS



STRIPPER  
Estrattore



GUIDE COMPLETE  
Guida completa



DIE Ø 80  
Matrice Ø 80



ITEM	PUNCH HSS Punzone HSS	€	STRIPPER Estrattore	€	GUIDE COMPLETE STANDARD Guida completa std	€	GUIDE COMPLETE LONG LIFE Guida completa rec affilatura	€	DIE HWS Matrice HWS	€
ROUND	RND1PUCN06T		RND1PLCNT		RND1GACNS		RND1GACNLL		RND1MACN01T	
STANDARD	RND1PUCN06S		RND1PLCNS		RND1GACNS		RND1GACNLL		RND1MACN01S	
SPECIAL 0	RND1PUCN06C		RND1PLCND		RND1GACNS		RND1GACNLL		RND1MACN01D	
SPECIAL 1	RND1PUCN06D		RND1PLCND		RND1GACNS		RND1GACNLL		RND1MACN01D	
SPECIAL 2	RND1PUCN06F		RND1PLCND		RND1GACNS		RND1GACNLL		RND1MACN01D	

### CAT 254

Max 100 mm

PUNCH HSS  
Punzone HSS



STRIPPER  
Estrattore



GUIDE COMPLETE  
Guida completa



DIE Ø 135  
Matrice Ø 135



ITEM	PUNCH HSS Punzone HSS	€	STRIPPER Estrattore	€	GUIDE COMPLETE INDEX Guida completa rotante	€	DIE HWS Matrice HWS	€
ROUND	RNE1PUCN06T		RNE1PLCNT		RNE1GACNR		RNE1MACN01T	
STANDARD	RNE1PUCN06S		RNE1PLCNS		RNE1GACNR		RNE1MACN01S	
SPECIAL 0	RNE1PUCN06C		RNE1PLCND		RNE1GACNR		RNE1MACN01D	
SPECIAL 1	RNE1PUCN06D		RNE1PLCND		RNE1GACNR		RNE1MACN01D	
SPECIAL 2	RNE1PUCN06F		RNE1PLCND		RNE1GACNR		RNE1MACN01D	

**INDEX STATION ADAPTOR *Adattatore per stazione index***



ITEM	PUNCH ADAPTOR <i>Adattatore per punzoni</i>	COD.	€	DIE ADAPTOR <i>Adattatore per matrici</i>	COD.	€
	254 index - 251	RNEBRIPU		252 - STAZ.A 2 A4	RNACRIMA	
	254 index - 252	RNCEBRIPU		252 - 251	RNBCRIMA	
	254 index - 253	RNEBRIPU		254 index - 252	RNECRIMA	
				254 index - 253	RNDERIMA	

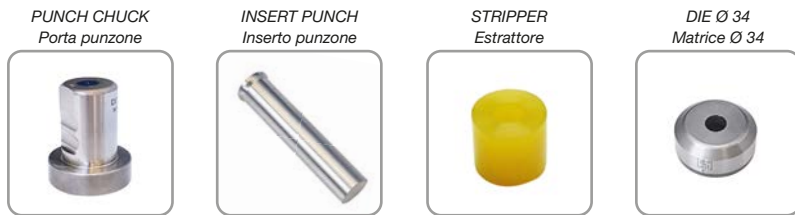
**SLITTING TOOL *Utensili da taglio***



ITEM	CAT 253				CAT 254			
	SLITTING TOOL BLADE <i>Lama da taglio</i>	€	BLADE HOLDER <i>Porta lama</i>	€	SLITTING TOOL BLADE <i>Lama da taglio</i>	€	BLADE HOLDER <i>Porta lama</i>	€
	For holder RAINER type <i>Per porta lama Rainer</i> <b>HSS AMC1PULTG06S</b>		For RAINER blade <i>Per lama Rainer</i> <b>RND1PPLACNS</b>		For holder RAINER type <i>Per porta lama Rainer</i> <b>HSS AMD1PULTG06S</b>		For RAINER blade <i>Per lama Rainer</i> <b>RNE1PPLACNS</b>	
	<b>PSM AMC1PULTG02S</b>				<b>PSM AMD1PULTG02S</b>			
	For holder SUCE type <i>Per porta lama SUCE</i> <b>HSS RAB1PULT006S</b>				For holder SUCE type <i>Per porta lama SUCE</i> <b>HSS RNE1PULCN06S</b>			
	<b>PSM= powder steel</b>							

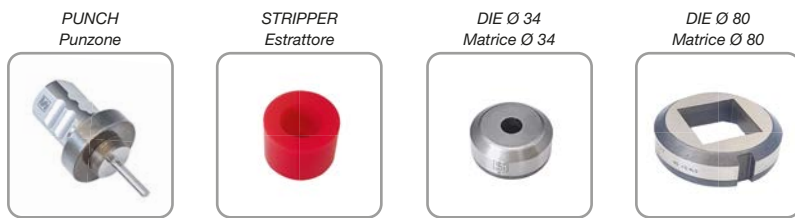
COATING	A STATION	A STATION SMART	251	252	253	254	BLADE 253 <i>Lama da taglio</i>	BLADE 254 <i>Lama da taglio</i>
PROBUS								
GEMINUS								
LEVATUS								

## PUNCH INSERT



ITEM	PUNCH CHUCK Porta punzone	€	INSERT PUNCH Inserito punzone	€	STRIPPER Estrattore	€	DIE Ø 34 Matrice Ø 34	€
ROUND UP TO 10 mm	RNA10PPT0T		RNA10PST006T		RNA10PLT0T		RNB1MACN01T	
ROUND UP TO 15 mm	RNA15PPT0T		RNA15PST006T		RNA15PLT0T		RNB1MACN01T	

## PUNCH DIMENSION BETWEEN 1.5 TO 30.5



ITEM	PUNCH HP Punzone HP	€	STRIPPER Estrattore	€	DIE Ø 34 Matrice Ø 34	€	DIE Ø 80 Matrice Ø 80	€
ROUND	RNA1PUT306T		RNA1PLT2T		RNB1MACN01T		RNB1MAT001T	
STANDARD	RNA1PUT306S		RNA1PLT2S				RNB1MAT001S	
SPECIAL 0	RNA1PUT306C		RNA1PLT2D				RNB1MAT001D	
SPECIAL 1	RNA1PUT306D		RNA1PLT2D				RNB1MAT001D	
SPECIAL 2	RNA1PUT306F		RNA1PLT2D				RNB1MAT001D	

## PUNCH DIMENSION BETWEEN 30.6 TO 55.0



Punch assembly:  
punch + o-ring +  
OR collar stripper  
+ stripper

ITEM	PUNCH HP Punzone HP	€	O-RING Guarnizione	€	OR COLLAR FOR STRIPPER OR per estrattore	€	STRIPPER Estrattore	€	DIE Ø 80 Matrice Ø 80	€
ROUND	RNB1PUT306T		NOR000002187		MRNB1RST2		RNB1PLT2T		RNC1MAT001T	
STANDARD	RNB1PUT306S		NOR000002187		MRNB1RST2		RNB1PLT2S		RNC1MAT001S	
SPECIAL 0	RNB1PUT306C		NOR000002187		MRNB1RST2		RNB1PLT2D		RNC1MAT001D	
SPECIAL 1	RNB1PUT306D		NOR000002187		MRNB1RST2		RNB1PLT2D		RNC1MAT001D	
SPECIAL 2	RNB1PUT306F		NOR000002187		MRNB1RST2		RNB1PLT2D		RNC1MAT001D	

## PUNCH DIMENSION BETWEEN 55.1 A 80.0



Punch assembly:  
punch + O-ring +  
OR collar stripper  
+ stripper

ITEM	PUNCH HP Punzone HP	€	O-RING	€	OR COLLAR FOR STRIPPER OR per estrattore	€	STRIPPER Estrattore	€	DIE Ø 130 Matrice Ø 80	€
ROUND	RNC1PUT306T		NOR000002287		MRNC1RST2		RNC1PLT2T		RNE1MAT001T	
STANDARD	RNC1PUT306S		NOR000002287		MRNC1RST2		RNC1PLT2S		RNE1MAT001S	
SPECIAL 0	RNC1PUT306C		NOR000002287		MRNC1RST2		RNC1PLT2D		RNE1MAT001D	
SPECIAL 1	RNC1PUT306D		NOR000002287		MRNC1RST2		RNC1PLT2D		RNE1MAT001D	
SPECIAL 2	RNC1PUT306F		NOR000002287		MRNC1RST2		RNC1PLT2D		RNE1MAT001D	

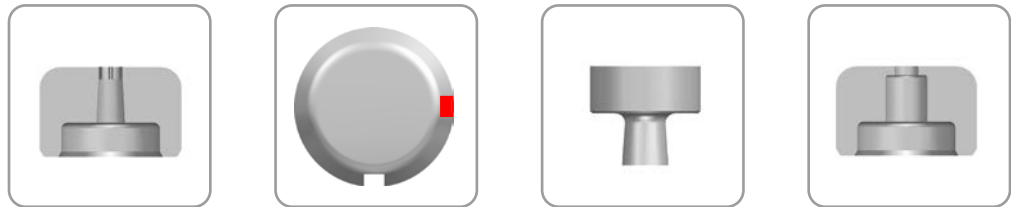
## ADD ON

### Shear option



TYPE OF SHEAR	Roof top	Inverted roof top	Double valley	Whisper	Four ways
WHEN	Best option when punching force is high, minimum feed 75% of tool length	Recommended for nibbling at maximum tonnage but inverted stress could cause breakage	Recommended when punch is longer than 80mm But inverted stress could cause breakage	Best option classic trumpf style to reduce noise and tonnage, max 5°	Recommended for punching and nibbling Ø and square at maximum tonnage
CODE	Cod V	Cod VR	Cod 3P	Cod W	Cod 4P
ADD ON	€	€	€	€	€

### Add on



	Die lock slug	Extra Key slot	Back taper punch Jump station*	Reduced milled land
ADD ON	€	€		€
WHEN	Best option to prevent the come out of the slug	C-D-E thick turret dies keys 0-90 standard shape 0-135 square	Recommended for punching thick material, more than 4mm. *Thick turret punches example: square10 in C station	To facilitate the fall of the slug; recommended when long side is more than 20 times short side, ex re22x1



	Die clearance <math>< 0.1</math>	Punch width	Die size <math>< 1.5</math>
ADD ON			





**SUCE TOOLING s.r.l**

Via dei Mille, 21

20098 San Giuliano Milanese, Milano - ITALY

Ph: +39(0)2-9840484 - (0)2-98242228

Email: [info@sucetool.com](mailto:info@sucetool.com)

[www.sucetooling.com](http://www.sucetooling.com)

