suce tool

- MULTITOOL
- SIZE 1-2
- FITTING
- SLITTING TOOLS
- SPECIAL

TRUMPF STYLE TRUMPF STYLE

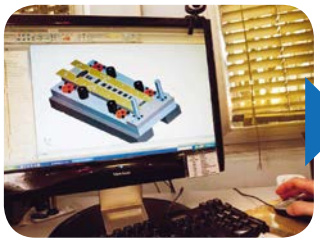
2021

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



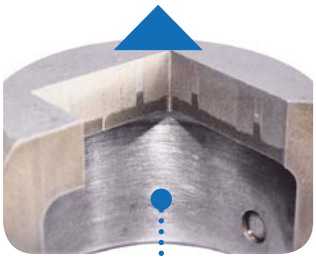
Thanks to our project department, with 3D CAD stations, we are able to design both standard and special tools.

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.

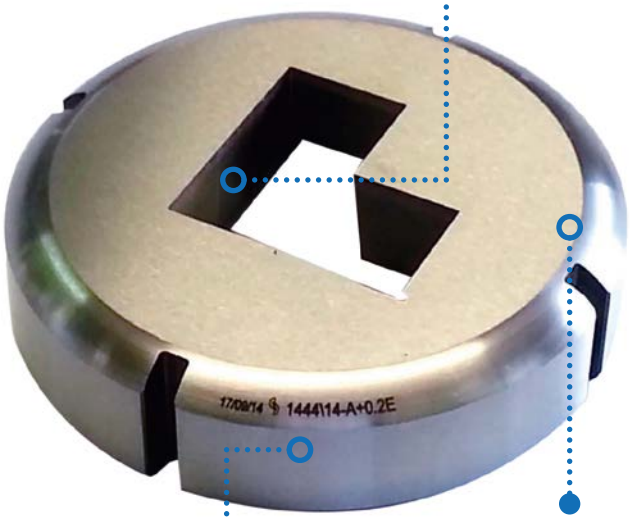
No shape limitation thanks to Wire EDM technology.

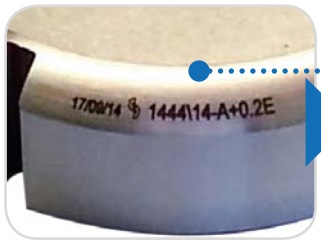
Different lock-slug systems available



Wire EDM load-unload cell.

In warehouse: ready for delivery.





SUCE special ID number.

Tool testing: fault free.

Manufacturing execution system.

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/mm² stainless steel 60 - 70 kg/mm² aluminium 20 - 25 kg/mm²*

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)					
mm	1 - 1.5	2	3	4	5	6
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

PROBUS ALCRN coating , features a unique nanostructure for a substantial decrease of internal stress; is tailored to withstanding cutting temperatures of up to 1050° C.
A distinguishing feature of PROBUS coating is the improved wear performance at the cutting edge of the tool. Uniform distribution of mechanical forces in the vicinity of the cutting edge provides an additional advantage. This property puts PROBUS ahead of other coatings, making it excel in applications where similar AlCrN coatings provide only modest lifetime improvements.

STRUCTURE	Micro Hardness (HV 0.05)	Friction coefficient (100 cr6)	Thickness (micron)	Deposition temperature (°C)	Max temperature (max°C)	Colour
Multilayer	3.000	0.5	2 - 4	450 - 500	1050	Grey

GEMINUS

The double coating is obtained by overlaying the traditional TICN with Movic self-lubricating coating. The TiCN 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 TiCN coating ensures a higher wear resistance.
A further improvement of the TiCN 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

ADD-ONS PAG 136

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.

LINE	TRUMPF	THICK TURRET	SALVAGNINI	MURATEC
PUNCH SIZE 0	HSS / PSM	-	-	-
PUNCH	ISODUR / PSM	ISODUR / PSM	ISODUR / PSM	ISODUR
INSERT BLADES	HSS / PSM	HSS / PSM	-	-
DIE	HWS / ISODUR	HWS / ISODUR	ISODUR / PSM	HWS

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 %

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 %

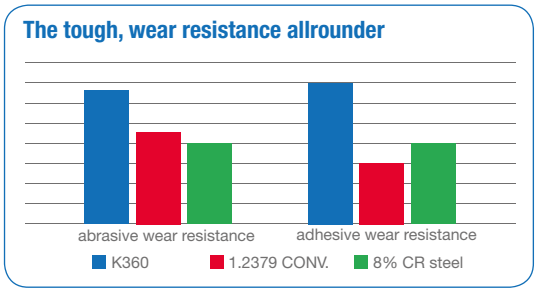
ISODUR

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

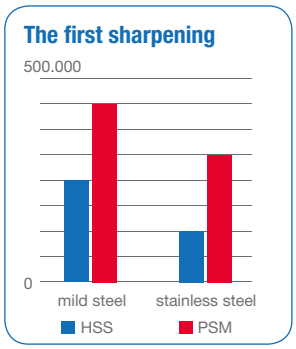
K360 Chemical composition	
Carbonium	1.25 %
Chromium	8.75 %
Molybdenum	2.70 %
Vanadium	1.18 %



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.



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

GENERAL RULES TRUMPF STYLE TOOLING

In order to optimize the use of tooling we would recommend the following basic guidelines:

a) the punching surface does not have to be lower than 60% of the used punch surface;

b) in case of nibbling minimum feed must be 0.5 x thickness, smaller rd punch with thickness 1 mm is 4 mm, smaller rd punch with thickness 2 mm is 6 mm, smaller rd punch with thickness 3 mm is 8 mm;

c) before exceeding tons capability calculate punching force with formula at page 5;

d) the tool dimension does not have to be lower than the material thickness and the shorter side must be at least 5% of the longest side;

e) the advantage of the technical improvements of some models of dies punching penetration should be at least 2.5 mm;

f) slitting tools must be appropriately sharpened and must have radius on corner (0.5 mm);

g) the use of the steels commonly called High Speed Steel for our punches allows the punching of any steel; however in order to increase considerably the punching effectiveness and reduce cold welds, apply some type of coating, see pag. 10 and use oil lubricant on sheet surface;

h) be sure that tooling cutting edge are without seizing or cold welding material; if any, remove them with a diamond file;

i) radius on punch corner is 0.25 mm;

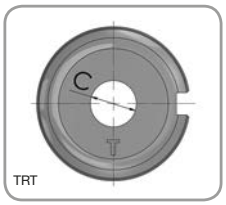
j) delivery time: 2/3 days standard, 5/7 coating tools, some items are available at stock;

k) ordering specifications: machine type, form, thickness and material, dimensions, desired delivery.

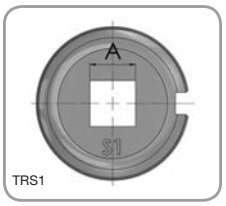
MACHINE GROUP:

A:	**B:**	**C:**	**D:**	**E:**
CN700, CN900 CN701, CN901	CN 901E, CN902 CS75, CS75,2	CN1200S_A CS15, CS20, CS20A, MP25_D	TRUMATIC 20, 20A, 202M	SUN400 TRUMATIC 150K, 151K, 152K, 180K, 1802K, 180KD, 180LK, 202K, 225K 235K, 300K, 400K
F:	**G:**	**H:**	**I:**	**S:**
TRUMATIC 150, 180W, 180R, 185, 240, 240R, 250, 260R	TRUMATIC 20AW, 202W, 300W, 300LW, 300PW, 300TOP, 400W	TRUMATIC 500R, 200R, 190R, 600L	TRUMATIC 1000R, 2000R, 2020R, 3000R, 5000R, 6000L, 7000	MINIMATIC 100 TRUMATIC 120R, 160R

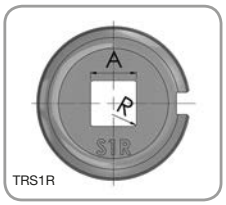
TRUMPF ROUND AND STANDARD SHAPE



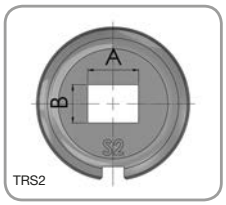
C:



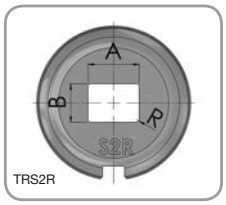
A:



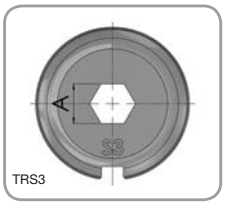
A: R:



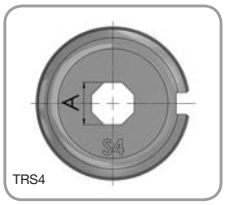
A: B:



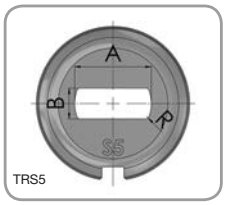
A: B:
R:



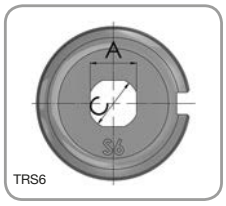
A:



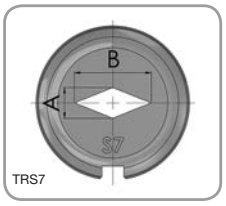
A:



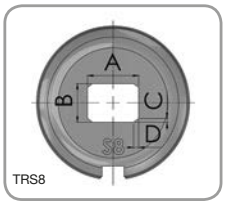
A: B:
R:



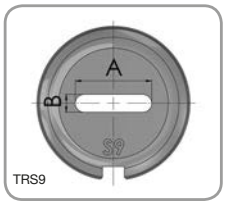
A: C:



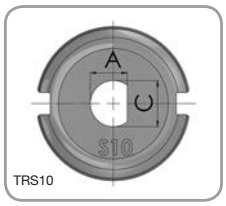
A: B:



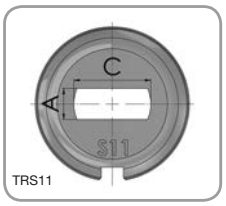
A: B:
C: D:



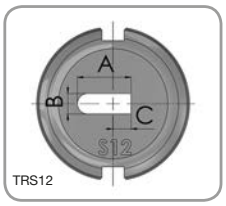
A: B:



A: C:

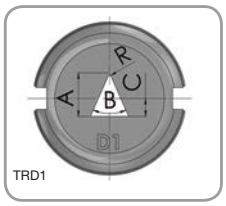


A: C:

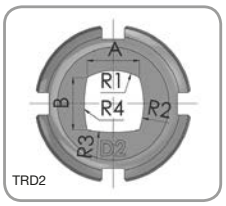


A: B:
C:

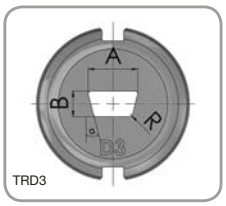
SPECIAL A



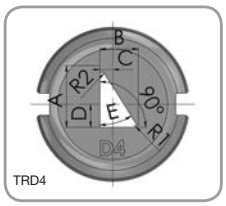
A: B:
C: R1:



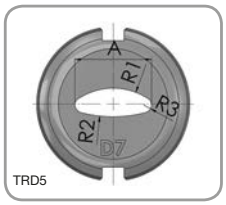
A: B:
R1: R2:
R3: R4:



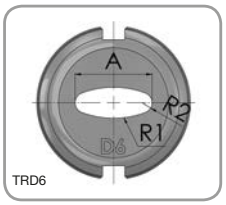
A: B:
α: R:



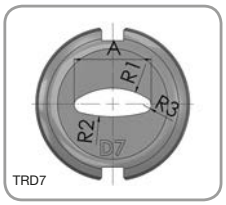
A: B: C:
D: E:
R1: R2:



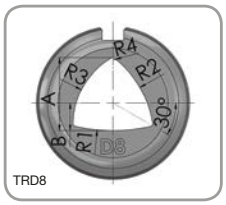
A: B:



A: R1:
R2:



A: R1:
R2: R3:

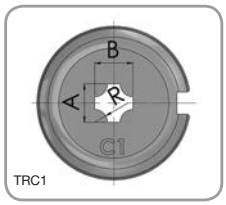


A: B:
R1: R2:
R3: R4:

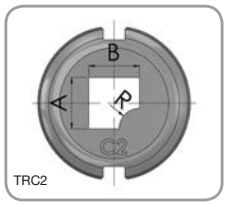
Die key:
Machine gr H, I ● Round 0° ● Std shape, Square S1, S1R 0° ● Machine gr A, B, C, D, E, F, G Round 0° ● Standard shape 0-90° ● Square S1, S1R 0-135°

ADD-ONS PAG 136

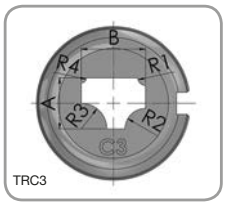
SPECIAL B



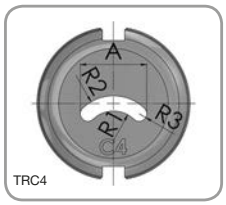
A: B:
R:



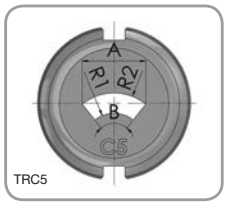
A: B:
R:



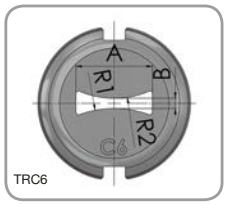
A: B:
R1: R2:
R3: R4:



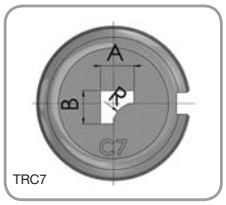
A: R1:
R2: R3:



A: B:
R1: R2:



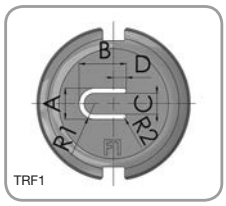
A: B:
R1: R2:



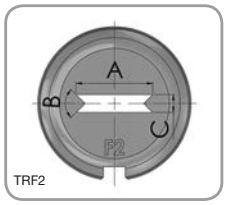
A: B:
R:

Note:
R<3 price is SPECIAL 2

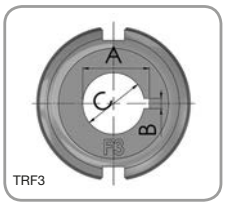
SPECIAL C & CUSTOMIZED



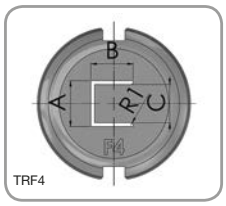
A: B:
C: D:
R1: R2:



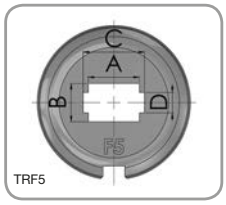
A: B:
C:



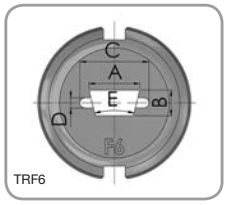
A: B:
C:



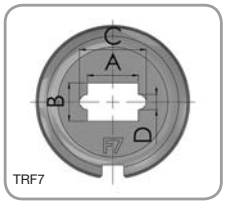
A: B:
C: R1:



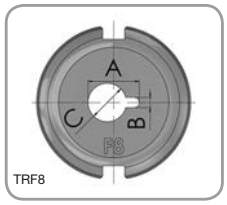
A: B:
C: D:



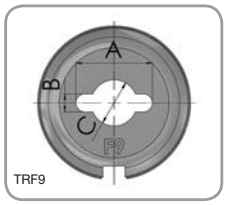
A: B:
C: D:
E:



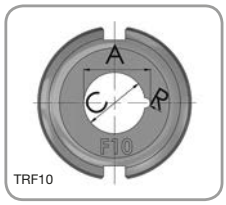
A: B:
C: D:



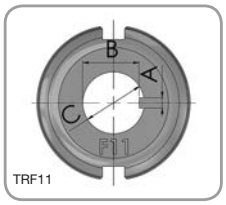
A: B:
C:



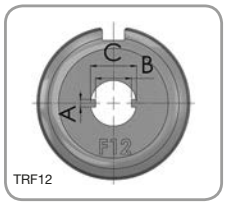
A: B:
C:



A: C:
R:



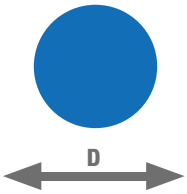
A: B:
C:



A: B:
C:

TRUMPF style

ROUND



Shapes:
TRT

SIZE	ISODUR PUNCH Ø mm *	€	Probus	Geminus	Levatus
0	Ø6 mis 1.5 - 6.0 L59.5 TRA6PST006T L63 TRA6PSTL06T PSM L59.5 TRA6PST004T L63 TRA6PSTL04T				
	Ø10.5 mis 1.5 - 6.0 L59.5 TRA105PST006T L63 TRA105PSTL06T				
	Ø10.5 mis 6.1 - 10.5 L59.5 TRA105PST006T L63 TRA105PSTL06T PSM L59.5 TRA105PST004T L63 TRA105PSTL04T				
1	1.5 - 30.0 L74 TRA1PUT006T L77.5 TRA1PUTL06T PSM L74 TRA1PUT004T L77.5 TRA1PUTL04T				
2	30.1 - 40.0 L74 TRB2PUT006T L77.5 TRB2PUTL06T				
	40.1 - 51.0 L74 TRC1PUT006T L77.5 TRC1PUTL06T				
	51.1 - 60.0 L7 4 TRD1PUT006T** L77.5 TRD1PUTL06T**				
	60.1-76.2 L74 TRE1PUT006T*** L77.5 TRE1PUTL06T***				

PUNCH 0

max punching cap.50kN
D6 max thickness 2 mm
mat. 40 kg/mm²
D6 max thickness 1.5 mm
mat.60 kg/mm²
D10.5 max thickness 4 mm
mat.40 kg/mm²
D10.5 max thickness 2 mm
mat.60 kg/mm²
Punch grinding life 3 mm h 59,5
Punch grinding life 6.5 mm h 63,0

PUNCH

GR1 max thickness 10 mm
Mat 60kg/mm²
GR1 punching force 20 KN

GR2 max thickness 12 mm
Mat.60kg/mm²
GR2 punching force 30 KN*

Punch grinding life 3 mm h 74
Punch grinding life 6.5 mm h 77,5
*20 kN Whisper tool

HEAVY DUTY PUNCH WITH COLLAR Ø 40mm

Recommended when punching force >20 tons

** Punch 0 HSS*
*** not suitable with urethan stripper*
**** max Ø 70 mm with urethan stripper*

SIZE	HWS DIE	€	ISODUR DIE	€
0/1 1.5 - 32 mm	TRA1MAT001T		TRA1MAT006T	
2 32.1 - 77.8 mm	TRE1MAT001T		TRE1MAT006T	

DIE

GR1 max thickness 10 mm
mat.60kg/mm² ,Max 250 kN
GR2 max thickness 12 mm
mat.60kg/mm², Max 180 kN
Die grinding life 1 mm
Key 0° round, standard

Machine without rotation*:
Keys 0 - 90° standard shape
Keys 0 - 135° square
* to specify

REINFORCED DUTY ISODUR DIE

Recommended when punching force > 15 tons

SIZE	STRIPPER GROUP MACHINE E - F - G	€	STRIPPER GROUP MACHINE H - I	€
0/1/2 1.5 - 76.2 mm	TRAEPLT0T		TRAEPLT500T	

SIZE	STRIPPER GROUP MACHINE S	€	STRIPPER GROUP MACHINE HACO OMES	€
0/1/2 1.5 - 76.2 mm	TRABPLTMT		TRAEPLOMT	

STRIPPER

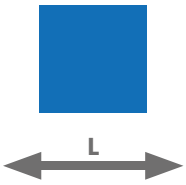
Punch size +1 mm

Stripper pin:
NSP0600003016

ADD-ONS PAG 136

suce tool

SQUARE



Shapes:
TRS1 - TRS1R

SIZE	ISODUR PUNCH L mm *	€	Probus	Geminus	Levatus
0	1.0 - 4.2 L59.5 TRA6PST006S L63 TRA6PSTL06S PSM L59.5 TRA6PST004S L63 TRA6PSTL04S				
	4.21 - 7.4 L59.5 TRA105PST006S L63 TRA105PSTL06S PSM L59.5 TRA105PST004S L63 TRA105PSTL04S				
1	1.5 - 21.0 L74 TRA1PUT006S L77.5 TRA1PUTL06S PSM L74 TRA1PUT004S L77.5 TRA1PUTL04S				
2	21.1 - 28.0 L74 TRB2PUT006S L77.5 TRB2PUTL06S				
	28.1 - 35.0 L74 TRC1PUT006S L77.5 TRC1PUTL06S				
	35.1 - 42.0 L74 TRD1PUT006S** L77.5 TRD1PUTL06S**				
	42.1 - 53.8 L74 TRE1PUT006S*** L77.5 TRE1PUTL06S***				

PUNCH 0

max punching cap.50kN
D6 max thickness 2 mm
mat. 40 kg/mm²
D6 max thickness 1.5 mm
mat.60 kg/mm²
D10.5 max thickness 4 mm
mat.40 kg/mm²
D10.5 max thickness 2 mm
mat.60 kg/mm²
Punch grinding life 3 mm h 59,5
Punch grinding life 6.5 mm h 63,0

PUNCH

GR1 max thickness 10 mm
Mat 60kg/mm²
GR1 punching force 20 KN

GR2 max thickness 12 mm
Mat.60kg/mm²
GR2 punching force 30 KN*

Punch grinding life 3 mm h 74
Punch grinding life 6.5 mm h 77,5
*20 kN Whisper tool

HEAVY DUTY PUNCH WITH COLLAR Ø 40mm
Recommended when punching force > 20 tons
Recommended radius on corner 1 m

** Punch 0 HSS*
*** not suitable with urethan stripper*
**** max diagonal 70 mm with urethan stripper*

SIZE	HWS DIE	€	ISODUR DIE	€
0/1 1.5 - 22 mm	TRA1MAT001Q		TRA1MAT006Q	
2 22.1 - 55 mm	TRE1MAT001Q		TRE1MAT006Q	

DIE

GR1 max thickness 10 mm
mat.60kg/mm² ,Max 250 kN
GR2 max thickness 12 mm
mat.60kg/mm², Max 180 kN
Die grinding life 1 mm
Key 0° round, standard

Machine without rotation*:
Keys 0 - 90° standard shape
Keys 0 - 135° square
* to specify

REINFORCED DIE ISODUR
GR1 TRA1MATP01S + €
GR2 TRC1MATR01S + €
Recommended when punching force >15 tons
Recommended radius on corner 1 mm

SIZE	STRIPPER GROUP MACHINE E - F - G	€	STRIPPER GROUP MACHINE H - I	€
0/1/2 1.5 - 53.8 mm	TRAEPLT0S		TRAEPLT500S	

SIZE	STRIPPER GROUP MACHINE S	€	STRIPPER GROUP MACHINE HACO OMES	€
0/1/2 1.5 - 53.8 mm	TRABPLTMS		TRAEPLOMS	

STRIPPER

Punch size +1 mm

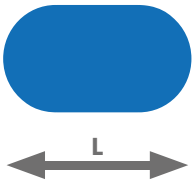
Stripper pin:
NSP0600003016

ADD-ONS PAG 136

TRUMPF style

RECTANGLE

OBROUND



Shapes:
TRS2 - TRS2R - TRS3 - TRS4 - TRS5 - TRS6 - TRS7 - TRS8
TRS9 - TRS10 - TRS11 - TRS12

SIZE	ISODUR PUNCH L mm *	€	Probus	Geminus	Levatus
0	1.0 - 5.9 L59.5 TRA6PST006A L63 TRA6PSTL06A PSM L59.5 TRA6PST004A L63 TRA6PSTL04A				
	5.91 - 10.4 L59.5 TRA105PST006A L63 TRA105PSTL06A PSM L59.5 TRA105PST004A L63 TRA105PSTL04A				
1	1.5 - 30.5 L74 TRA1PUT006A L77.5 TRA1PUTL06A PSM L74 TRA1PUT004A L77.5 TRA1PUTL04A				
2	30.6 - 40.0 L74 TRB2PUT006A L77.5 TRB2PUTL06A				
	40.1 - 50.8 L74 TRC1PUT006A L77.5 TRC1PUTL06A				
	50.9 - 60.0 L74 TRD1PUT006A** L77.5 TRD1PUTL06A**				
	60.1 - 76.2 L74 TRE1PUT006A*** L77.5 TRE1PUTL06A***				

PUNCH 0

max punching cap.50kN
D6 max thickness 2 mm
mat. 40 kg/mm²
D6 max thickness 1.5 mm
mat.60 kg/mm²
D10.5 max thickness 4 mm
mat.40 kg/mm²
D10.5 max thickness 2 mm
mat.60 kg/mm²
Punch grinding life 3 mm h 59,5
Punch grinding life 6.5 mm h 63,0

PUNCH

GR1 max thickness 10 mm
Mat 60kg/mm²
GR1 punching force 20 KN

GR2 max thickness 12 mm
Mat.60kg/mm²
GR2 punching force 30 KN*

Punch grinding life 3 mm h 74
Punch grinding life 6.5 mm h 77,5
*20 kN Whisper tool

HEAVY DUTY PUNCH WITH COLLAR Ø 40mm
Recommended when punching force > 20 tons
Recommended radius on corner 1 m

** Punch 0 HSS*
*** not suitable with urethan stripper*
**** max diagonal 70 mm with urethan stripper*

DIE

GR1 max thickness 10 mm
mat.60kg/mm² ,Max 250 kN
GR2 max thickness 12 mm
mat.60kg/mm², Max 180 kN
Die grinding life 1 mm
Key 0° round, standard

Machine without rotation*:
Keys 0 - 90° standard shape
Keys 0 - 135° square
* to specify

SIZE	HWS DIE	€	ISODUR DIE	€
0/1 1.5 - 32 mm	TRA1MAT001S		TRA1MAT006S	
2 32.1 - 77.8 mm	TRE1MAT001S		TRE1MAT006S	

REINFORCED DIE ISODUR
GR1 TRA1MATP01S + €
GR2 TRC1MATR01S + €
Recommended when punching force >15 tons
Recommended radius on corner 1 mm

SIZE	STRIPPER GROUP MACHINE E - F - G	€	STRIPPER GROUP MACHINE H - I	€
0/1/2 1.5 - 76.2 mm	TRAEPLT0S		TRAEPLT500S	

SIZE	STRIPPER GROUP MACHINE S	€	STRIPPER GROUP MACHINE HACO OMES	€
0/1/2 1.5 - 76.2 mm	TRABPLTMS		TRAEPLOMS	

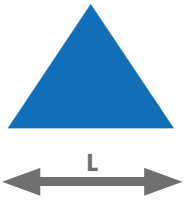
STRIPPER

Punch size +1 mm

Stripper pin:
NSP0600003016

ADD-ONS PAG 136

SPECIAL A



Shapes:
TRD1 - TRD2 - TRD3 - TRD4 - TRD5 - TRD6 - TRD7 - TRD8

SIZE	ISODUR PUNCH L mm *	€	Probus	Geminus	Levatus
0	1.5 - 10.4 L59.5 TRA105PST006D L63 TRA105PSTL06D PSM L59.5 TRA105PST004D L63 TRA105PSTL04D				
1	1.5 - 30.5 L74 TRA1PUT006D L77.5 TRA1PUTL06D PSM L74 TRA1PUT004D L77.5 TRA1PUTL04D				
2	30.6 - 40.0 L74 TRB2PUT006D L77.5 TRB2PUTL06D				
	40.1 - 50.8 L74 TRC1PUT006D L77.5 TRC1PUTL06D				
	50.9 - 60.0 L74 TRD1PUT006D** L77.5 TRD1PUTL06D**				
	60.1 - 76.2 L74 TRE1PUT006D*** L77.5 TRE1PUTL06D***				

PUNCH 0

max punching cap.50kN
D6 max thickness 2 mm
mat. 40 kg/mm²
D6 max thickness 1.5 mm
mat.60 kg/mm²
D10.5 max thickness 4 mm
mat.40 kg/mm²
D10.5 max thickness 2 mm
mat.60 kg/mm²
Punch grinding life 3 mm h 59,5
Punch grinding life 6.5 mm h 63,0

PUNCH

GR1 max thickness 10 mm
Mat 60kg/mm²
GR1 punching force 20 KN

GR2 max thickness 12 mm
Mat.60kg/mm²
GR2 punching force 30 KN*

Punch grinding life 3 mm h 74
Punch grinding life 6.5 mm h 77,5
*20 kN Whisper tool

HEAVY DUTY PUNCH WITH COLLAR Ø 40mm
Recommended when punching force > 20 tons
Recommended radius on corner 1 m

** Punch 0 HSS*
*** not suitable with urethan stripper*
**** max diagonal 70 mm with urethan stripper*

SIZE	HWS DIE	€	ISODUR DIE	€
0/1 1.5 - 32 mm	TRA1MAT001D		TRA1MAT006D	
2 32.1 - 77.8 mm	TRE1MAT001D		TRE1MAT006D	

DIE

GR1 max thickness 10 mm
mat.60kg/mm² ,Max 250 kN
GR2 max thickness 12 mm
mat.60kg/mm², Max 180 kN
Die grinding life 1 mm
Key 0° round, standard

Machine without rotation*:
Keys 0 - 90° standard shape
Keys 0 - 135° square
* to specify

REINFORCED DIE ISODUR
GR1 TRA1MATP01S + €
GR2 TRC1MATR01S + €
Recommended when punching force >15 tons
Recommended radius on corner 1 mm

SIZE	STRIPPER GROUP MACHINE E - F - G	€	STRIPPER GROUP MACHINE H - I	€
0/1/2 1.5 - 76.2 mm	TRAEPLT0D		TRAEPLT500D	

SIZE	STRIPPER GROUP MACHINE S	€	STRIPPER GROUP MACHINE HACO OMES	€
0/1/2 1.5 - 76.2 mm	TRABPLTMD		TRAEPLOMD	

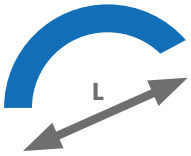
STRIPPER

Punch size +1 mm

Stripper pin:
NSP0600003016

ADD-ONS PAG 136

SPECIAL B



Shapes:
TRC1 - TRC2 - TRC3 - TRC4 - TRC5 - TRC6 - TRC7 R>2.95

SIZE	ISODUR PUNCH L mm *	€	Probus	Geminus	Levatus
0	1.5 - 10.4 L59.5 TRA105PST006C L63 TRA105PSTL06C PSM L59.5 TRA105PST004C L63 TRA105PSTL04C				
1	1.5 - 30.5 L74 TRA1PUT006C L77.5 TRA1PUTL06C PSM L74 TRA1PUT004C L77.5 TRA1PUTL04C				
2	30.6 - 40.0 L74 TRB2PUT006C L77.5 TRB2PUTL06C				
	40.1 - 50.8 L74 TRC1PUT006C L77.5 TRC1PUTL06C				
	50.9 - 60.0 L74 TRD1PUT006C** L77.5 TRD1PUTL06C**				
	60.1 - 76.2 L74 TRE1PUT006C*** L77.5 TRE1PUTL06C***				

PUNCH 0

max punching cap.50kN
D6 max thickness 2 mm
mat. 40 kg/mm²
D6 max thickness 1.5 mm
mat.60 kg/mm²
D10.5 max thickness 4 mm
mat.40 kg/mm²
D10.5 max thickness 2 mm
mat.60 kg/mm²
Punch grinding life 3 mm h 59,5
Punch grinding life 6.5 mm h 63,0

PUNCH

GR1 max thickness 10 mm
Mat 60kg/mm²
GR1 punching force 20 KN

GR2 max thickness 12 mm
Mat.60kg/mm²
GR2 punching force 30 KN*

Punch grinding life 3 mm h 74
Punch grinding life 6.5 mm h 77,5
*20 kN Whisper tool

HEAVY DUTY PUNCH WITH COLLAR Ø 40mm
Recommended when punching force > 20 tons
Recommended radius on corner 1 m

** Punch 0 HSS*
*** not suitable with urethan stripper*
**** max diagonal 70 mm with urethan stripper*

DIE

GR1 max thickness 10 mm
mat.60kg/mm² ,Max 250 kN
GR2 max thickness 12 mm
mat.60kg/mm², Max 180 kN
Die grinding life 1 mm
Key 0° round, standard

Machine without rotation*:
Keys 0 - 90° standard shape
Keys 0 - 135° square
* to specify

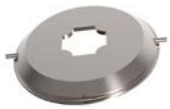
SIZE	HWS DIE	€	ISODUR DIE	€
0/1 1.5 - 32 mm	TRA1MAT001F		TRA1MAT006F	
2 32.1 - 77.8 mm	TRE1MAT001F		TRE1MAT006F	

REINFORCED DIE ISODUR
GR1 TRA1MATP01S + €
GR2 TRC1MATR01S + €
Recommended when punching force >15 tons
Recommended radius on corner 1 mm

SIZE	STRIPPER GROUP MACHINE E - F - G	€	STRIPPER GROUP MACHINE H - I	€
0/1/2 1.5 - 76.2 mm	TRAEPLT0F		TRAEPLT500F	

SIZE	STRIPPER GROUP MACHINE S	€	STRIPPER GROUP MACHINE HACO OMES	€
0/1/2 1.5 - 76.2 mm	TRABPLTMF		TRAEPLOMF	

STRIPPER

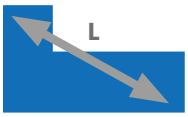


Punch size +1 mm

Stripper pin:
NSP0600003016

ADD-ONS PAG 136

SPECIAL CUSTOMIZED



Shapes:
TRC1 - TRC2 - TRC3 - TRC4 - TRC5 - TRC6 - TRC7 R<2.95
TRF1 - TRF2 - TRF3 - TRF4 - TRF5 - TRF6 - TRF7 - TRF8
TRF9 - TRF10 - TRF11 - TRF12

SIZE	ISODUR PUNCH L mm *	€	Probus	Geminus	Levatus
0	1.5 - 10.4 L59.5 TRA105PST006F L63 TRA105PSTL06F PSM L59.5 TRA105PST004F L63 TRA105PSTL04F				
1	1.5 - 30.5 L74 TRA1PUT006F L77.5 TRA1PUTL06F PSM L74 TRA1PUT004F L77.5 TRA1PUTL04F				
2	30.6 - 40.0 L74 TRB2PUT006F L77.5 TRB2PUTL06F				
	40.1 - 50.8 L74 TRC1PUT006F L77.5 TRC1PUTL06F				
	50.9 - 60,0 L74 TRD1PUT006F** L77.5 TRD1PUTL06F**				
	60.1 - 76.2 L74 TRE1PUT006F*** L77.5 TRE1PUTL06F***				

PUNCH 0

max punching cap.50kN
D6 max thickness 2 mm
mat. 40 kg/mm²
D6 max thickness 1.5 mm
mat.60 kg/mm²
D10.5 max thickness 4 mm
mat.40 kg/mm²
D10.5 max thickness 2 mm
mat.60 kg/mm²
Punch grinding life 3 mm h 59,5
Punch grinding life 6.5 mm h 63,0

PUNCH

GR1 max thickness 10 mm
Mat 60kg/mm²
GR1 punching force 20 KN

GR2 max thickness 12 mm
Mat.60kg/mm²
GR2 punching force 30 KN*

Punch grinding life 3 mm h 74
Punch grinding life 6.5 mm h 77,5
*20 kN Whisper tool

HEAVY DUTY PUNCH WITH COLLAR Ø 40mm
Recommended when punching force > 20 tons
Recommended radius on corner 1 m

** Punch 0 HSS*
*** not suitable with urethan stripper*
**** max diagonal 70 mm with urethan stripper*

SIZE	HWS DIE	€	ISODUR DIE	€
0/1 1.5 - 32 mm	TRA1MAT001F		TRA1MAT006F	
2 32.1 - 77.8 mm	TRE1MAT001F		TRE1MAT006F	

DIE

GR1 max thickness 10 mm
mat.60kg/mm² ,Max 250 kN
GR2 max thickness 12 mm
mat.60kg/mm², Max 180 kN
Die grinding life 1 mm
Key 0° round, standard

Machine without rotation*:
Keys 0 - 90° standard shape
Keys 0 - 135° square
* to specify

REINFORCED DIE ISODUR
GR1 TRA1MATP01S + €
GR2 TRC1MATR01S + €
Recommended when punching force >15 tons
Recommended radius on corner 1 mm

SIZE	STRIPPER GROUP MACHINE E - F - G	€	STRIPPER GROUP MACHINE H - I	€
0/1/2 1.5 - 76.2 mm	TRAEPLT0F		TRAEPLT500F	

SIZE	STRIPPER GROUP MACHINE S	€	STRIPPER GROUP MACHINE HACO OMES	€
0/1/2 1.5 - 76.2 mm	TRABPLTMF		TRAEPLOMF	

STRIPPER

Punch size +1 mm

Stripper pin:
NSP0600003016

ADD-ONS PAG 136

MULTITOOL

MT3 MT4 MT6
MODEL TC500R, TC200R, TC190R, TC600L
Max thickness 3.2 mm (40 kg/mm²) - 2 mm (60 kg/mm²)
Punching force 55 Kn
Punch grinding life 0.2 mm DIE 1 mm

MT5 , MT10
MODEL TC2000R, TC2020R, TC5000R, TC6000L
Max thickness 4.5 mm (40 kg/mm²)
Max thickness 3mm (60 kg/mm²)
Mt5 max punching force 87 kn
Mt10 max punching force 57 Kn
Punch grinding life 0.2 mm DIE 1 mm

MT3 MT6 - 10.5 mm

MT4 - 16 mm

MT5 - 16 mm

MT10 - 10.5 mm

MULTITOOL	ITEM MT3 - MT6	€	ITEM MT4	€	ITEM MT5	€	ITEM MT10	€
HSS PUNCH ROUND	TRA0PUM606T		TRA0PUM406T		—		—	
ISODUR DIE ROUND	TRA0MAM601T		TRA0MAM401T		—		—	
HSS PUNCH STANDARD SHAPE	TRA0PUM606S		TRA0PUM406S		—		—	
ISODUR DIE STANDARD SHAPE	TRA0MAM601S		TRA0MAM401S		—		—	
PSM PUNCH ROUND	—		—		TRA0PUM504T		TRA0PUM1004T	
PSM DIE ROUND	—		—		TRA0MAM504T		TRA0MAM1004T	
PSM PUNCH STANDARD SHAPE	—		—		TRA0PUM504S		TRA0PUM1004S	
PSM DIE STANDARD SHAPE	—		—		TRA0MAM504S		TRA0MAM1004S	

Coating					
	PROBUS	MT6 €	MT4 €	MT5 €	MT10 €
	GEMINUS	MT6 €	MT4 €	MT5 €	MT10 €
	LEVATUS	MT6 €	MT4 €	MT5 €	MT10 €

DIE HOLDER

MT4

MT5

MT6

MT10

DIE HOLDER	ITEM	€	ITEM	€	ITEM	€	ITEM	€
	TRA0PMMT4		TRA0PMMT5		TRA0PMMT6		TRA0PMMT10	

REVOTOOL BOSCHERT 6, 7-8 POSITION

REVO 7-8

REVO 7-8

REVO 6

REVO 6

ITEM	ISODUR PUNCH REVO 7-8	€	ISODUR DIE REVO 7-8	€	ISODUR PUNCH REVO 6	€	ISODUR DIE REVO 6	€
ROUND	TRA0PUM806T		TRA0MAM801T		BOA0PUM606T		BOA0MAM606T	
STANDARD	TRA0PUM806S		TRA0MAM801S		BOA0PUM606S		BOA0MAM606S	
SPECIAL B	TRA0PUM806C		TRA0MAM801D		BOA0PUM606C		BOA0MAM606D	
SPECIAL A	TRA0PUM806D		TRA0MAM801D		BOA0PUM606D		BOA0MAM606D	
SPECIAL CUSTOMIZED	TRA0PUM806F		TRA0MAM801D		BOA0PUM606F		BOA0MAM606D	

Coating			
	PROBUS	REVO7-8 €	REVO6 €
	GEMINUS	REVO7-8 €	REVO6 €
	LEVATUS	REVO7-8 €	REVO6 €

ADD-ONS PAG 136

SLITTING TOOL

Max. Thickness 3 mm
Radius on corner 0.5 mm

BLADE HOLDER 30x5 56x5 76.2x5 TO COMPLETE WITH ALIGNMENT RING TRAFAATR		ALIGNMENT RING 40 mm		BLADE HOLDER 30x5 56x5 76.2x5 WITH INTEGRATED ALIGN.RING	
ITEM	€	ITEM	€	ITEM	€
TRCEPPL5690		TRAFAATR		TR56/76PL	

30 x 5

56 x 5

76.2 x 5

BLADE	30X5				56X5				76.2X5			
	HSS	€	PSM	€	HSS	€	PSM	€	HSS	€	PSM	€
RECT	TR30LRE06		TR30LRE02		TR56LRE06		TR56LRE02		TR76LRE06		TR76LRE02	
TRAP	TR30LTP06		TR30LTP02		TR56LTP06		TR56LTP02		TR76LTP06		TR76LTP02	
MICROJ	TR30LMJ06		TR30LMJ02		TR56LMJ06		TR56LMJ02		TR76LMJ06		TR76LMJ02	

30 x 5

56 x 5

76.2 x 5

BLADE PROBUS COATING	30X5				56X5				76.2X5			
	HSS + Probus	€	PSM + Probus	€	HSS + Probus	€	PSM + Probus	€	HSS + Probus	€	PSM + Probus	€
RECT	TR30LRE06H		TR30LRE02H		TR56LRE06H		TR56LRE02H		TR76LRE06H		TR76LRE02H	
TRAP	TR30LTP06H		TR30LTP02H		TR56LTP06H		TR56LTP02H		TR76LTP06H		TR76LTP02H	
MICROJ	TR30LMJ06H		TR30LMJ02H		TR56LMJ06H		TR56LMJ02H		TR76LMJ06H		TR76LMJ02H	

30 x 5

56 x 5

76.2 x 5

BLADE GEMINUS COATING	30X5				56X5				76.2X5			
	HSS + Geminus	€	PSM + Geminus	€	HSS + Geminus	€	PSM + Geminus	€	HSS + Geminus	€	PSM + Geminus	€
RECT	TR30LRE06F		TR30LRE02F		TR56LRE06F		TR56LRE02F		TR76LRE06F		TR76LRE02F	
TRAP	TR30LTP06F		TR30LTP02F		TR56LTP06F		TR56LTP02F		TR76LTP06F		TR76LTP02F	
MICROJ	TR30LMJ06F		TR30LMJ02F		TR56LMJ06F		TR56LMJ02F		TR76LMJ06F		TR76LMJ02F	

ADD-ONS PAG 136

SLITTING TOOL

Max. Thickness 3 mm
Radius on corner 0.5 mm

30 x 5 - 56 x 6

76.2 x 5

76.2 x 5

56 x 5

76.2 x 5

SLITTING TOOL	30 x 5		56 x 5		76.2 x 5	
	ITEM	€	ITEM	€	ITEM	€
DIE HOLDER (with shims)	TRCEMAIN90		TRCEMAIN90		TRCFMAIN76TT	
DIE HOLDER WITH BRUSHES (with shims)	—		—		TRCFMAIN76BR	
DIE SHIMS 1 SET INCLUDES 0.2 0.3 0.5 mm	TRCEMAINSP56		TRCEMAINSP56		TRCEMAINSP76	

30 x 5

56 x 5

56 x 5

76.2 x 5

76.2 x 5

SLITTING TOOL	30x5		56x5		76.2x5	
	ITEM	€	ITEM	€	ITEM	€
RECTANGLE HSS DIE INSERT ENTIRE MAX THICKNESS 2 mm	TRCEIM30900		TRCEIM569006		TRCFIM76TT06	
RECTANGLE PAIR HSS DIE INSERT MAX THICKNESS 3 mm	—		TRCEIM56P206		TRCFIM76P206	
MICROJ HSS DIE INSERT ENTIRE MAX THICKNESS 2 mm	TRCEIM309MI6		TRCEIM569MI6		TRCFIM76TMI06	

SLITTING TOOL CLOSE TO DEFORMATION

Minimum distance to emboss:
min 35mm H5, min 22 H2
URETHAN STRIPPER

TRD1PA56X5

TRE1PA76.2X5

TRD1PLPO56X5

TRE1PLPO76.2X5

TRD1PU56X5

TRE1PU76.2X5

TRDEVI76.2X5

TRCFAATP

ITEM	56X5 max thickness 2.5 mm		76.2x5 max thickness 2 mm	
	ITEM	€	ITEM	€
PUNCH ASSEMBLY	TRD1PA56X5		TRE1PA76.2X5	
PUNCH	TRD1PU56X5		TRE1PU76.2X5	
PAIR OF URETHAN STRIPPER	TRD1PLPO56X5		TRE1PLPO76.2X5	
PAIR OF SCREW	TRDEVI76.2X5		TRDEVI76.2X5	
ALIGNMENT RING SIZE2	TRCFAATP		TRCFAATP	

Coating	PROBUS	€	GEMINUS	€	LEVATUS	€
56x5						
76.2x5						

ADD-ONS PAG 136

ALIGNMENT RING

TRABAATI

TRABAATITE

TRABAATM

TRCFAATP

TRCFAATPTE

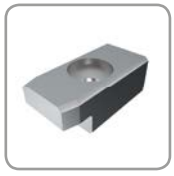
TRC1AATM

TRAFAATR

TRAFAACHT0

NSP02MR08016

TRACAACHTM



TRAFAACHTR

FITTING	MACHINE GR E, F, G, H, I		MACHINE GR A, B, C, D BOSCHERT EUROMAC HACO		MACHINE GR S	
	ITEM	€	ITEM	€	ITEM	€
ALIGNMENT RING SIZE 1	TRABAATI		TRABAATITE			
ALIGNMENT RING SIZE 2	TRCFAATP		TRCFAATPTE			
ALIGNMENT RING HD 40 mm	TRAFAATR		TRAFAATR			
ALIGNMENT KEY	TRAFAACHT0		NSP02MR08016			
ALIGNMENT KEY RING HD	TRAFAACHTR		TRAFAACHTR			

DIE ADAPTOR

TRABPMT0

TRABPMT0SP

TRCEPMT0

FITTING	MACHINE GR E, F, G, H, I	
	ITEM	€
DIE ADAPTOR ALL MODELS SIZE 1/2	TRABPMT0	
DIE ADAPTOR ALL MODELS SIZE 1/2 WITH BRUSHES	TRABPMT0SP	
DIE HOLDER SIZE 2	TRCEPMT0*	

** Only for machines group H, I*

PUNCH CHUCK

TRA6PPT0T

TRA105PPT0T

MGR14MBX135

FITTING	ITEM	€	ITEM	€	ITEM	€
PUNCH CHUCK	*D6 SIZE 0A* - TRA6PPT0T		*D10.5 SIZE 0B* - TRA105PPT0T		*SCREW M14* - MGR14MBX135	

SHIM

FITTING	MT5	€	MT10	€	Size 1	€	Size 2	€
DIE SHIMS mm	0,1		0,1		0,3		0,3	
	0,2		0,2		0,5		0,5	
	0,3		0,3		1		1	
	0,5		0,5		—		—	

ADD-ONS PAG 136

TRUMPF style

TRAFFPU

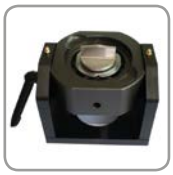
TRAAP

TRAAP

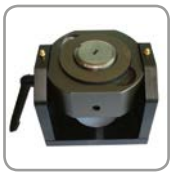
GRINDING DEVICE 1 TRSETAFFPM

GRINDING DEVICE 2 TRSETAFFPM

GRINDING DEVICE 3 TRSETAFFPM



GRINDING DEVICE 4 TRSETAFFPM



GRINDING DEVICE 5 TRSETAFFPM

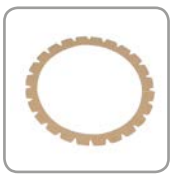
GRINDING DEVICE 6 TRSETAFFPM

FITTING	ITEM	€
PUNCH REGRIND VICE EQUIPMENT FLAT, WHISPER AND DOUBLE WHISPER	TRAFFPU	
FIXTURE REGRIND TOOLING DIE 1, DIE 2 PUNCH FLAT, WHISPER, DOUBLE WHISPER MULTITOOL PUNCH AND DIE	TRSETAFFPM	
SET STANDARD AND SPECIAL PUNCH WITH ALIGNMENT RING ANGLE: 0.45.90.135.180.225.270.315.360	TRAAP	

ADHESIVE PADS

TRAEAPT1

TRAEAPT2



TRE1AMT1

TRE1AMT2

TRE1AMT3

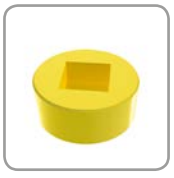
TRE1AMT4

ITEM	TRAEAPT1 For stripper	TRAEAPT2 For stripper	TRE1AMT1 For dies	TRE1AMT2 For dies	TRE1AMT3 For dies, die adaptor	TRE1AMT4 For dies
€						

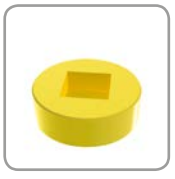
URETHAN STRIPPER 82SHORE

0 - 30.5 mm

30.6 - 40 mm



40.1 - 51 mm



51.1 - 70 mm

STRIPPER	ITEM	€	ITEM	€	ITEM	€	ITEM	€
ROUND	TRA1PLPOT		TRB2PLPOT		TRC1PLPOT		TRE1PLPOT	
STANDARD	TRA1PLPOS		TRB2PLPOS		TRC1PLPOS		TRE1PLPOS	
SPECIAL A - B	TRA1PLPOD		TRB2PLPOD		TRC1PLPOD		TRE1PLPOD	

ADD-ONS PAG 136

TOOL CARTRIDGE

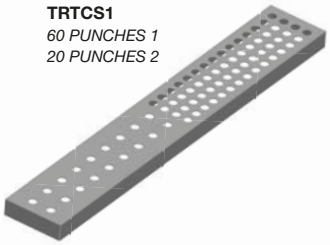
FITTING	ITEM	€
ADAPTOR FOR PRESS BRAKE MACHINE, PROMECAM STYLE	TRAEAP	

TOOL CARTRIDGE

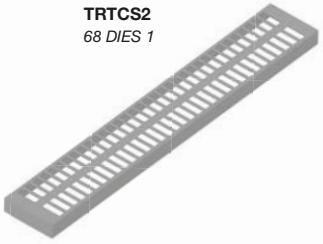
FITTING	ITEM	€
TOOL CARTRIDGE	TRAECP	

TOOL CABINET

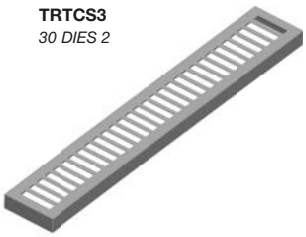
TRTCS1
60 PUNCHES 1
20 PUNCHES 2



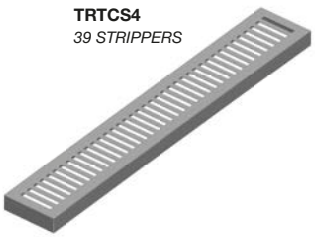
TRTCS2
68 DIES 1



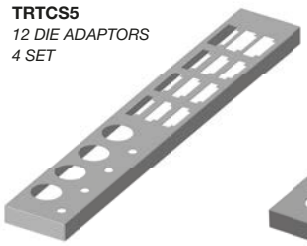
TRTCS3
30 DIES 2



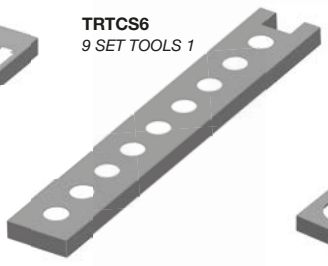
TRTCS4
39 STRIPPERS



TRTCS5
12 DIE ADAPTORS
4 SET

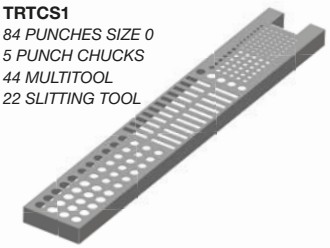


TRTCS6
9 SET TOOLS 1



TRTCS7
9 SET TOOLS 2

TRTCS1
84 PUNCHES SIZE 0
5 PUNCH CHUCKS
44 MULTITOOL
22 SLITTING TOOL



SHELVE	PUNCH	DIE 1	DIE 2	STRIPPER
	TRTCS1	TRTCS2	TRTCS3	TRTCS4
€				

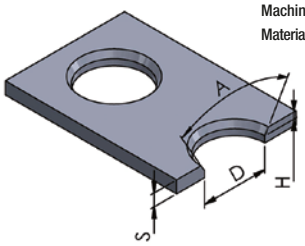
SHELVE	ADAPTOR	SET TOOL1	SET TOOL2	SIZE 0, RING, MULTITOOL
	TRTCS5	TRTCS6	TRTCS7	TRTCS8
€				

ADD-ONS PAG 136

FORMING TOOL DATA SHEET

COUNTER SINK DOWN

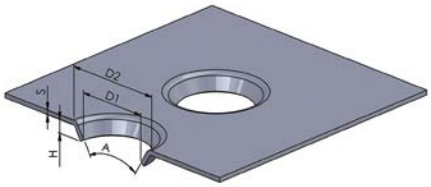
Machine Model: _____
Material: _____



A: _____
D: _____
H: _____
S: _____

COUNTER SINK DOWN FORMING AFTER PRE PIERCE

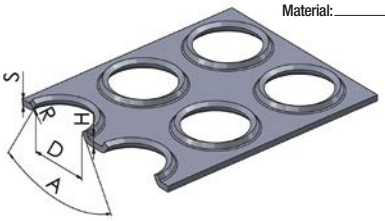
Machine Model: _____
Material: _____



A: _____
D1: _____
D2: _____
H: _____
S: _____

COUNTER SINK UP FORMING AFTER PRE PIERCE

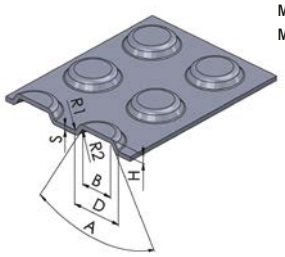
Machine Model: _____
Material: _____



A: _____
B: _____
D: _____
H: _____
R: _____
S: _____

EMBOSS UP ROUND

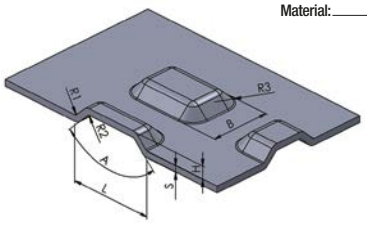
Machine Model: _____
Material: _____



A: _____
B: _____
D: _____
H: _____
R1: _____
R2: _____
S: _____

EMBOSS UP RECTANGULAR

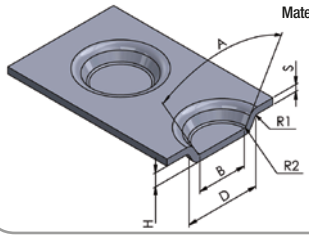
Machine Model: _____
Material: _____



A: _____
B: _____
L: _____
H: _____
R1: _____
R2: _____
R3: _____
S: _____

EMBOSS DOWN ROUND

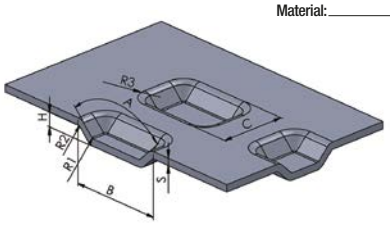
Machine Model: _____
Material: _____



A: _____
B: _____
D: _____
H: _____
S: _____
R1: _____
R2: _____

EMBOSS DOWN RECTANGULAR

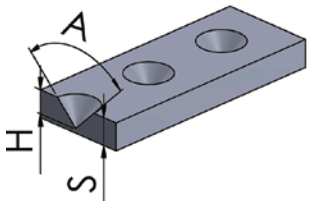
Machine Model: _____
Material: _____



A: _____
B: _____
C: _____
H: _____
R1: _____
R2: _____
R3: _____
S: _____

FORM DOWN MARKING TOOL

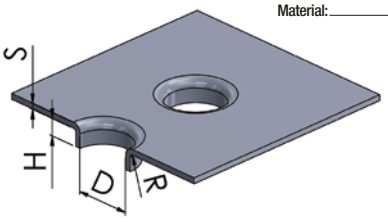
Machine Model: _____
Material: _____



A: _____
H: _____
S: _____

EXTRUSION DOWN ROUND

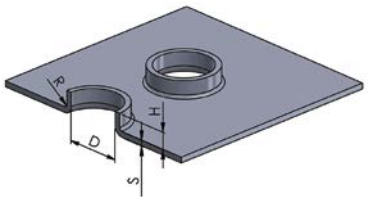
Machine Model: _____
Material: _____



D: _____
H: _____
R: _____
S: _____

EXTRUSION UP ROUND

Machine Model: _____
Material: _____

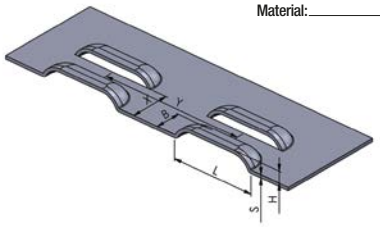


D: _____
H: _____
R: _____
S: _____

ADD-ONS PAG 136

LOUVER

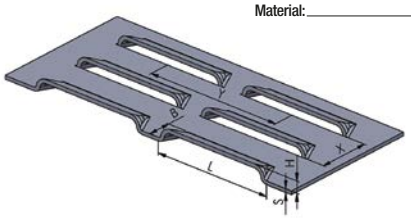
Machine Model: _____
Material: _____



B: _____
H: _____
L: _____
S: _____
X: _____
Y: _____

LOUVER TRUMPF

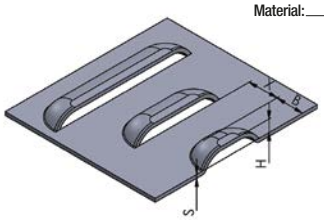
Machine Model: _____
Material: _____



B: 12
H: 60
L: 5.5
S: 0.8 - 2.5
X: 18
Y: 70

CONTINOUS LOUVER

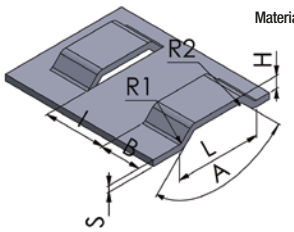
Machine Model: _____
Material: _____



B: _____
H: _____
S: _____
X: _____

BRIDGE UP

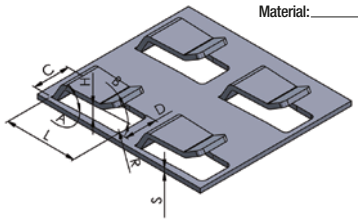
Machine Model: _____
Material: _____



A: _____
B: _____
H: _____
L: _____
I: _____
R1: _____
R2: _____
S: _____

LANCE UP_3 BENDS

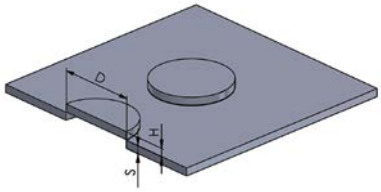
Machine Model: _____
Material: _____



A: _____
B: _____
C: _____
D: _____
H: _____
L: _____
R: _____
S: _____

SHEAR BUTTON

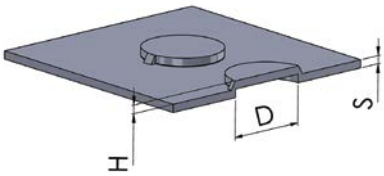
Machine Model: _____
Material: _____



D: _____
H: _____
S: _____

KNOCK OUT UP

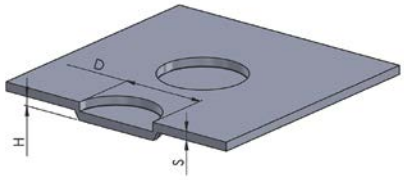
Machine Model: _____
Material: _____



D: _____
H: _____
S: _____

KNOCK-OUT DOWN

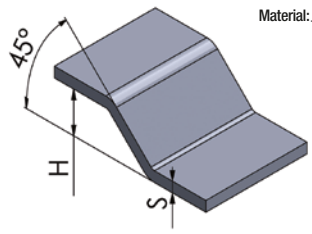
Machine Model: _____
Material: _____



D: _____
H: _____
S: _____

BEND 45°

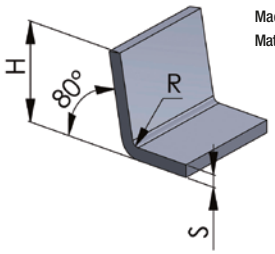
Machine Model: _____
Material: _____



H: _____
S: _____

BEND 80°

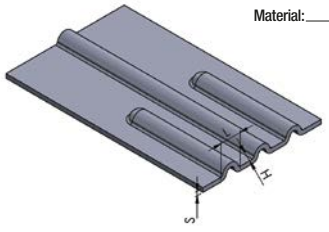
Machine Model: _____
Material: _____



H: _____
R: _____
S: _____

EMBOSS CONTINOUS

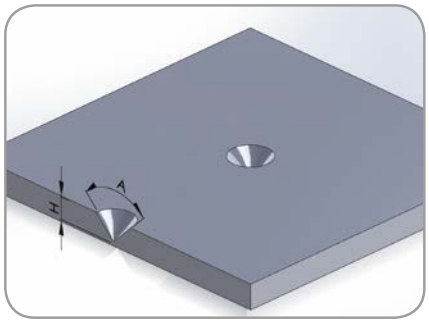
Machine Model: _____
Material: _____



H: _____
L: _____
S: _____

MARKING

3. PUNCH CHUCK
2. MARKING PUNCH 1 - 4.5 mm
2. MARKING PUNCH 5 - 8 mm
1. DIE



Custom dimensions (mm)

A :

H:

ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:

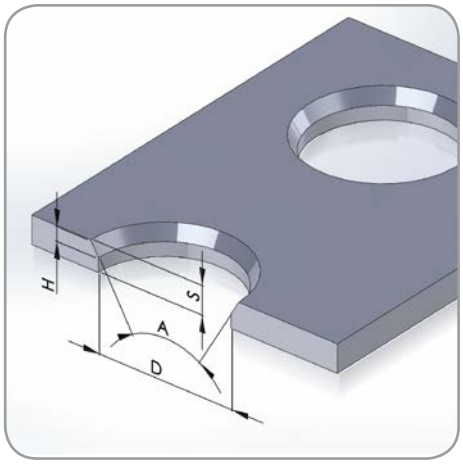
ITEM	PUNCH CHUCK	€	DIE	€	PUNCH TH1 - 4.5 mm	€	PUNCH TH5 - 8 mm	€
MARKING TOOL	TRA105PPT0T		TRA1MAT001T		FLTRA23P1 - 4.5		FLTRA23P4.5 - 8	

COUNTERSINK AFTER PREPIERCE

Notes and personal drafts. Please specify here the distance of any close deformation.

ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:



Custom dimensions (mm)

A :

D:

H:

S:

Order with prepierce tool:

Yes *No*

Prepierce dimension:
Dmax - [(Dmax - Dmin) * 0,7]

ITEM	PUNCH	€	DIE	€
COUNTERSINK AFTER PRE PUNCH	FLTRA09P		TRA1MAT001T	

COUNTERSINK DATA

DIN EN ISO 10642 (hexagon socket)

SCREW	Upper Ø mm	Thickness mm
M3	7.1	1 - 3
M4	9.4	1.5 - 3
M5	11.7	1.5 - 4
M6	14	2 - 4
M8	18.5	2 - 4

COUNTERSINK DATA

DIN EN ISO 2009 and 7046-1

SCREW	Upper Ø mm	Thickness mm
M2.5	5.9	1 - 3
M3	6.7	1 - 3
M4	8.8	1.5 - 3
M5	10.6	1.5 - 4
M6	12.7	2 - 4
M8	16.7	2 - 4

MAXIMUM COUNTERSINK DEPTH

MATERIAL TYPE	Thickness mm	H Maximum S%
Aluminum, Copper, Brass	0.8 - 5	95
Mild Steel, Galvanized Steel	0.8 - 3	85
	3.1 - 5	60
Stainless Steel	0.8 - 2	85
	2.1 - 3	60
	3.1 - 5	50

ADD-ONS PAG 136

EMBOSS UP

Sheet thickness 0.5 - 3 mm
Maximum size with solid Die 60 mm
Maximum size with Die with Springs 42 mm

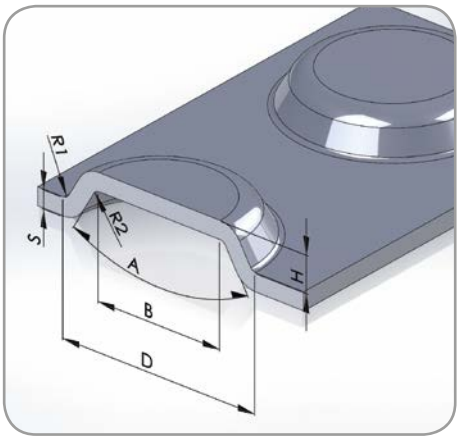
Notes and personal drafts. Please specify here the distance of any close deformation.

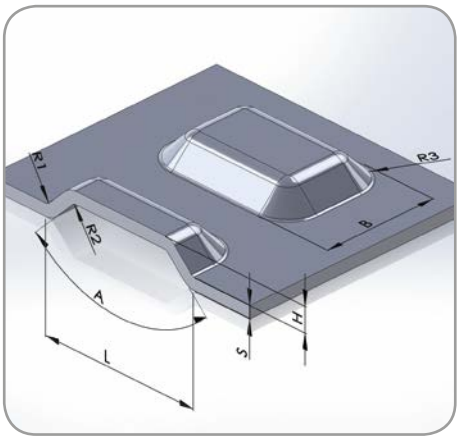
ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:

Solid Die sample “A” - min 90°

Die with Spring sample





Custom dimensions (mm)
ROUND/SHAPE :

A:
B:
D:
H:
L:
R1:
R2:
R3:
S:

ROUND	PUNCH	€	SOLID DIE	€	DIE ASSEMBLY	€	ALIGN. RING	€	URETHAN STRIPPER (OPT)	€
0 - 15 mm	FLTRB01BP		FLTRB01MA (S1)		FLTRB03MA		TRABAATI		FLTRB12E	
15.1 - 23 mm	FLTRB01B2P		FLTRB01ME (S2)		FLTRB03MA		TRCFAATP		FLTRB12EB2	
23.1 - 30 mm	FLTRB01CP		FLTRB01ME (S2)		FLTRB03MA		TRCFAATP		FLTRB12EC	
30.1 - 42 mm	FLTRB01DP		FLTRB01ME (S2)		FLTRB03MA		TRCFAATP		FLTRB12ED	
42.1 - 60 mm	FLTRB01EP		FLTRB01ME (S2)		FLTRB03MA		TRCFAATP			

SHAPE Diagonal	PUNCH	€	SOLID DIE	€	DIE ASSEMBLY	€	ALIGN. RING	€	URETHAN STRIPPER (OPT)	€
0 - 15 mm	FLTRB02BP		FLTRB02MA (S1)		FLTRB04MA		TRABAATI		FLTRB12E	
15.1 - 23 mm	FLTRB02B2P		FLTRB02ME (S2)		FLTRB04MA		TRCFAATP		FLTRB12EB2	
23.1 - 30 mm	FLTRB02CP		FLTRB02ME (S2)		FLTRB04MA		TRCFAATP		FLTRB12EC	
30.1 - 42 mm	FLTRB02DP		FLTRB02ME (S2)		FLTRB04MA		TRCFAATP		FLTRB12ED	
42.1 - 60 mm	FLTRB02EP		FLTRB02ME (S2)		FLTRB04MA		TRCFAATP			

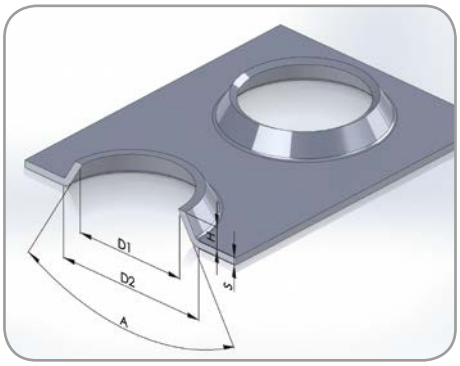
ADD-ONS PAG 136

COUNTERSINK UP FORMING AFTER PRE PIERCE

Notes and personal drafts. Please specify here the distance of any close deformation.

ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:



Custom dimensions (mm)

Direction: Up
A:
D1:
D2:
H:
S:

Pre-hole tool needed:

Yes *No*

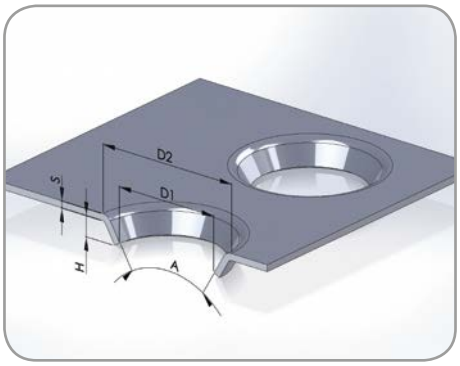
Pre-pierce diameters (mm)

Thickness 0.5: (M2.5 2.0) (M3 2.4) (M4 3.3) (M5 4.2) (M6 5.0) (M8 6.2) (M10 7.5)
Thickness 1.0: (M2.5 2.2) (M3 2.6) (M4 3.5) (M5 4.4) (M6 5.2) (M8 6.5) (M10 7.8)
Thickness 1.5: (M2.5 2.3) (M3 2.7) (M4 3.6) (M5 4.5) (M6 5.3) (M8 6.8) (M10 8.0)
Thickness 2.0: (M2.5 2.4) (M3 2.8) (M4 3.7) (M5 4.6) (M6 5.4) (M8 7.0) (M10 8.2)
Thickness 2.5: (M2.5 2.5) (M3 3.0) (M4 3.8) (M5 4.8) (M6 5.5) (M8 7.2) (M10 8.5)

Thread	Upper Ø mm
M2.5	5.9
M3	7.1
M4	9.4
M5	11.7
M6	14
M8	18.5
M10	23

ITEM	PUNCH	€	DIE ASSEMBLY	€	ALIGN.RING	€	SET
M2.5 M3 M4 M5 M6	FLTRB01BP		FLTRB03MA		(GR1)		
M8 M10	FLTRB01B2P		FLTRB03MA		(GR2)		

COUNTERSINK DOWN FORMING AFTER PRE PIERCE



Custom dimensions (mm)

Direction: Up
A:
D1:
D2:
H:
S:

Pre-hole tool needed:

Yes *No*

ITEM	PUNCH	€	SOLID DIE	€	ALIGN.RING	€
M2.5 M3 M4 M5 M6	FLTRB05BP		FLTRB01MA (S1)		TRABAATI	
M8 M10	FLTRB05CP		FLTRB05MA (S2)		TRCFAATP	

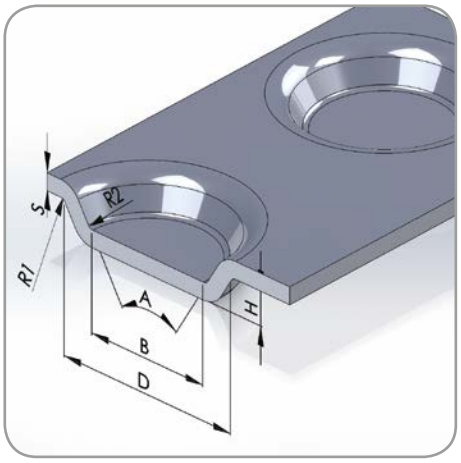
ADD-ONS PAG 136

EMBOSS DOWN

Notes and personal drafts. Please specify here the distance of any close deformation.

ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:



Custom dimensions (mm)
ROUND/SHAPE :

Direction: Down
A:
B:
C:
H:
R1:
R2:
R3:
S:

ROUND	PUNCH	€	URETHAN STRIPPER (optional)	€	DIE 2	€***	ALIGN.RING	€
0 - 15 mm	FLTRB05BP		FLTRB12E		FLTRB05MA		(GR1)	
15.1 - 30 mm	FLTRB05CP		FLTRB12EC		FLTRB05MA		(GR2)	
30.1 - 42 mm	FLTRB05EP		FLTRB12ED		FLTRB05MA		(GR2)	

SHAPE Diagonal	PUNCH	€*/**	URETHAN STRIPPER (optional)	€	DIE 2	€***	ALIGN.RING	€
0 - 15 mm	FLTRB06BP		FLTRB12E		FLTRB06MA		(GR1)	
15.1 - 23 mm	FLTRB06B2P		FLTRB12EB		FLTRB06ME		(GR2)	
23.1 - 30 mm	FLTRB06CP		FLTRB12EC		FLTRB06ME		(GR2)	
30.1 - 40 mm	FLTRB06EP		FLTRB12ED		FLTRB06ME		(GR2)	

** GRINDED - ** MILLED - *** DIE WITH EJECTORS + €*

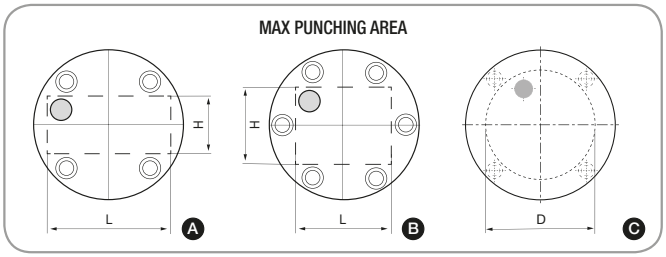
ADD-ONS PAG 136

CLUSTER

Notes and personal drafts. Please specify here the distance of any close deformation.

ORDERING SPECIFICATIONS

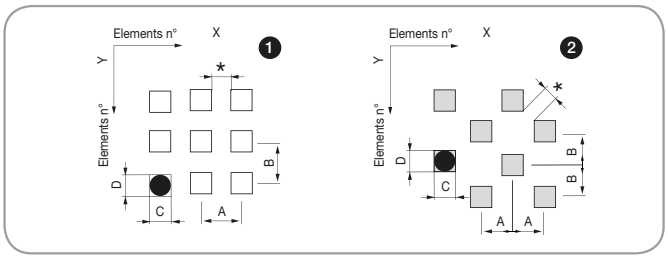
Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:



	SOLID	WITH REPLACEABLE INSERTS				
	DIAM (mm)	A		B		C
		L (mm)	H (mm)	L (mm)	H (mm)	D (mm)
II	Ø 76	65	25	45	40	Ø 55
I	Ø 30/38*	-	-	-	-	-

** machine group S*

If particular dimensions or holes are needed, our technical department is willing to find the solution that fits your needs.



Punch dimensions (mm):

A:
B:
C:
D:

Round:
Shape:
Pattern: *1/2*
Nx:
Ny:

** Minimum size 1.5 x thickness.*
Minimum distance between rounds 2.5 thickness
If size C <30 mm example 20 x 3 minimum distance between shapes 3 time thickness
if size C >30 mm example 40 x 3 minimum distance between shapes 4 time thickness

ADD-ONS PAG 136

ITEM	SOLID PUNCH H74	SOLID PUNCH H77.5	€	ALIGNMENT RING	€
1.5 - 30	TRA1PUT006M	TRA1PUTL06M		TRABAATI	
30.1 - 40	TRB2PUT006M	TRB2PUTL06M		TRCFAATP	
40.1 - 50.8	TRC1PUT006M	TRC1PUTL06M		TRCFAATP	
50.9 - 60	TRD1PUT006M	TRD1PUTL06M		TRCFAATP	
60.1 - 76.2	TRE1PUT006M	TRE1PUTL06M		TRCFAATP	

** STANDARD SHAPE € X QTY*
SOLID PUNCH SPECIAL 0-1-2 ADD € + IF PERIMETER <50 mm € X QTY, IF > 50 mm € X QTY


SOLID PUNCH

ITEM	INSERTS STYLE - ROUND *	INSERT STYLE - SHAPE **	€	ALIGNMENT RING	€
AREA 65X25 OR 45X40	FLTRB20PA	FLTRB21PA		TRAFAATR	
INTEGRATED ALIGN.RING VERSION AREA Ø 55	FLTRB21IPA				


INSERTS STYLE

ITEM	STRIPPER MACHINES GR E - F - G	STRIPPER MACHINES GR H - I	€
1.5 - 76.2	TRAEPLT0M	TRAEPLT500M	


STRIPPER

ITEM	DIE SIZE 1	€	ISODUR DIE SIZE 2	€	REINFORCED ISODUR DIE SIZE 2	€
	TRA1MATP06M		TRE1MAT006M		TRE1MATR01M	

*ADD **15%** DIE AND STRIPPER SIZE < 3.5 mm*
*ADD **15%** DIE AND STRIPPER SPECIAL 0, 1, 2 - ADD **20%** DIE PERIMETER > 50 mm*


DIE

* ROUND size mm	2 - 3 - 4 - 5 - 6 - 7 - 8	10 - 12	15	Decimal value ex 3.2 max 11.9
Add each Ø	€	€	€	€
Spare punch HSS	€	€	€	€ € €


SHAPE

** SHAPE diagonal size mm	2_20 Square and rectangle	>20 Square and rectangle	2_20 Obround and hexagon	>20 Obround and hexagon
Add each shape	€	€	€	€
Spare punch HSS	€	€	€	€


ROUND

DIAGONAL size mm	2 - 6	6.1 - 10	10.1 - 12	12.1 - 15	> 15.1
Coating Probus each Ø	€	€	€	€	€
Coating Geminus each Ø	€	€	€	€	€

LOUVER STANDARD 60 x 12 AND SPECIAL SIZE

Standard size 60 x 12
Technical info:
Thickness: 0.8 ÷ 2.5 mm
Height : 5.5 mm
Spacing X 18 mm, Y 70 mm

Notes and personal drafts.
Please specify here the distance of any close deformation.

ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:

TRUMPF STYLE DIM. (mm)

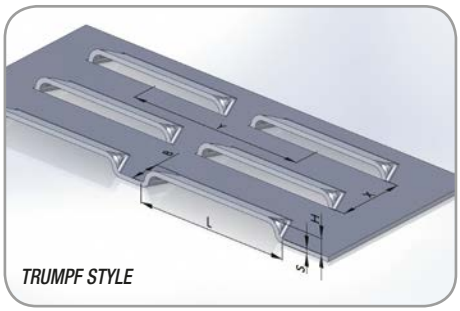
Y: 70
X: 18
B: 12
H: 5.5
L: 60
S: 0.8 - 2.5

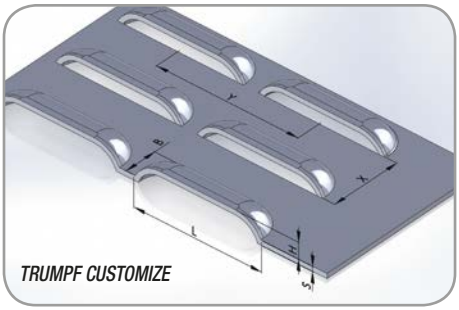
Probus Coating: *Yes*

TRUMPF CUSTOMIZED DIM. (mm)

Y:
X:
B:
H:
L:
S:

Probus Coating: *Yes*


TRUMPF STYLE


TRUMPF CUSTOMIZE

LOUVER SIZE:	PUNCH ASSEMBLY	€	DIE ASSEMBLY	€	ALIGN.RING	€	SET
Standard 60 x 12 mm	FLTRB14PA		FLTRB14M		(GR2)		
Special size (max 70 mm)	FLTRB14PB		FLTRB14MB		(GR2)		
SPARES	Upper revolving blade 60x12 PROBUS		Lower punch 60x12 PROBUS				

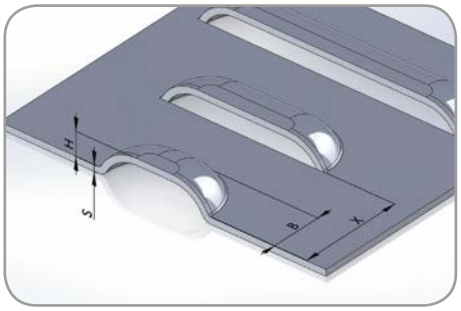
CONTINUOUS LOUVER

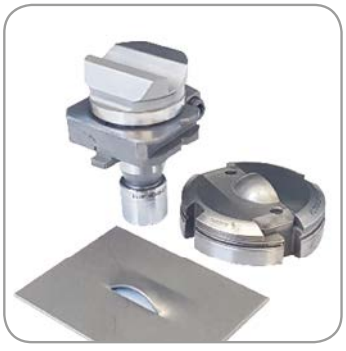
PUNCH SIZE 24 x 12 mm
Standard: L 12, H 5.5
Technical info:
Thickness: 0.8 ÷ 2.5 mm,
Height: 5.5 mm,
Spacing minimum 20 mm

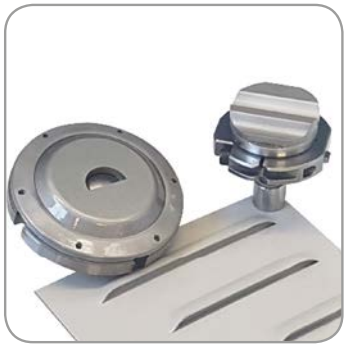
SPECIAL DIM. (mm)

B:
H:
S:
X:

Probus coating: *Yes* *No*







LOUVER SIZE:	PUNCH	€	DIE ASSEMBLY	€	DIE ASSEMBLY	€	ALIGN.RING	€
24x12 h 5.5	FLTRB13P		FLTRB13M1 (GR1)		FLTRB14MB		(GR2)	
			FLTRB13M2 (GR2)					

ADD-ONS PAG 136

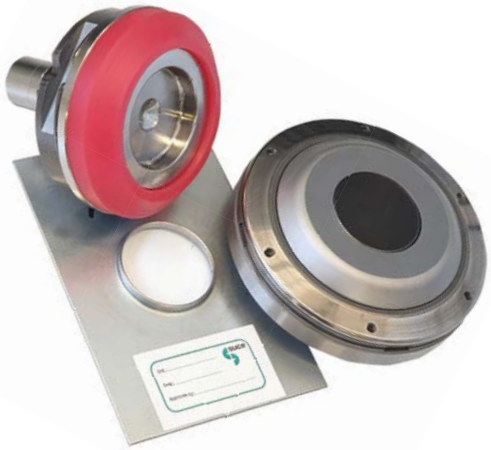
EXTRUSION UP AFTER PRE.PIERCE

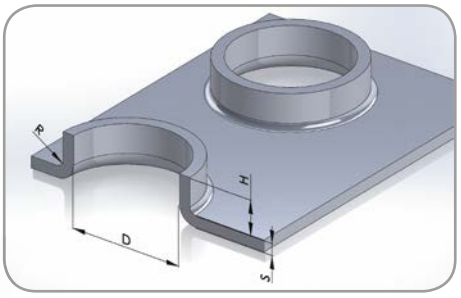
Sheet thickness 1 - 3 mm

Notes and personal drafts. Please specify here the distance of any close deformation.

ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:





Custom dimensions (mm)

D:
H:
R:
S:

Geminus coating: *Yes* *No*

Extrusion according to DIN7952

Thread size M2.5 pre-punch diameter 1.0 mm, thickness 0.8 - 1.5, diameter hole 2.10 - 2.30*
Thread size M3 pre-punch diameter 1.5/1.8 mm, thickness 0.8 - 1.5, diameter hole 2.55 - 2.80*
Thread size M4 pre-punch diameter 2.0/2.3 mm, thickness 1.0 - 2.0, diameter hole 3.35 - 3.70*
Thread size M5 pre-punch diameter 2.5/2.7 mm, thickness 1.0 - 2.0, diameter hole 4.25 - 4.65*
Thread size M6 pre-punch diameter 3.0/3.3 mm, thickness 1.5 - 2.5, diameter hole 5.10 - 5.55*
Thread size M8 pre-punch diameter 4.1/4.5 mm, thickness 1.5 - 2.5, diameter hole 6.80 - 7.40*
Thread size M10 pre-punch diameter 5/5.5 mm, thickness 1.5 - 2.5, diameter hole 8.50 - 9.30*
Extrusion tapping Height: 2 times thickness

**Hole size for tapping in machine.*

D SIZE	PUNCH	€	URETHAN STRIPPER	€	DIE ASSEMBLY	€	ALIGN.RING	€	SET
0 - 6 mm	FLTRB12PB		FLTRB12E		FLTRB12M1 (GR1)		(GR1)		
6.1 - 9.40 mm	FLTRB12PB		FLTRB12E		FLTRB12ME		(GR1)		
9.5 - 25 mm	FLTRB12PC		FLTRB12EC		FLTRB12ME		(GR2)		
25.1 - 42 mm	FLTRB12PE		FLTRB12EE		FLTRB12ME		(GR2)		
SPARES	PUNCH 0 - 25 mm FLTRB12IP				PUNCH 25.1 - 42mm FLTRB12IPB				
	COATING GEMINUS 0 - 25 mm				COATING GEMINUS 25.1 - 42 mm				

EXTRUSION UP 1 HIT

ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:

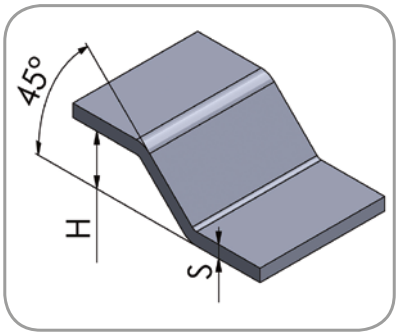
ITEM	PUNCH	€	DIE ASSEMBLY	€	ALIGN.RING	€	SET
	FLTRB12PB		FLTRB12M1 (GR1)		(GR2)		

STEPPING TOOL

Notes and personal drafts. Please specify here the distance of any close deformation.

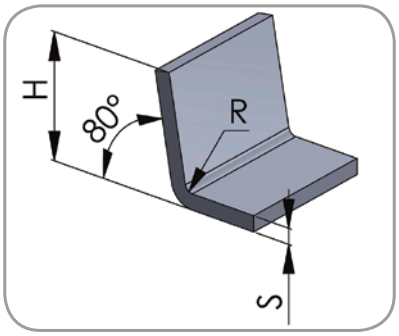
ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:



Custom dimensions (mm)

H:
S:



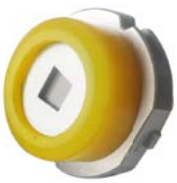
Custom dimensions (mm)

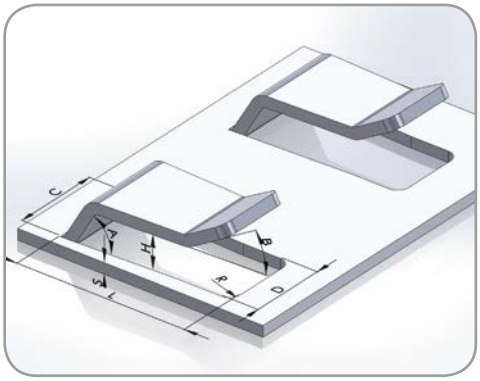
H:
R:
S:

ANGLE	PUNCH	€	DIE	€	ALIGN.RING	€	SET
45°	FLTRB07P		FLTRB02ME		(GR2)		
80°	FLTRB07P80		FLTRB02ME		(GR2)		

LANCE UP

Sheet thickness 0.5 - 2.5 mm





Custom dimensions (mm)

A:
B:
C:
D:
H:
L:
R:
S:

Probus Coating: *Yes* *No*

SHEET THICKNESS 0.5 - 2.5 mm	PUNCH	€	DIE ASSEMBLY	€	URETHAN STRIPPER	€	ALIGN. RING	€	SET
1 - 2 BENDS	FLTRB19P		FLTRB19M		FLTRB19E		(GR2)		
3 BENDS	FLTRB193P		FLTRB19-3M		FLTRB19E		(GR2)		
RENFORCED	FLTRB19PR		FLTRB19MR		FLTRB19E		(GR2)		

ADD-ONS PAG 136

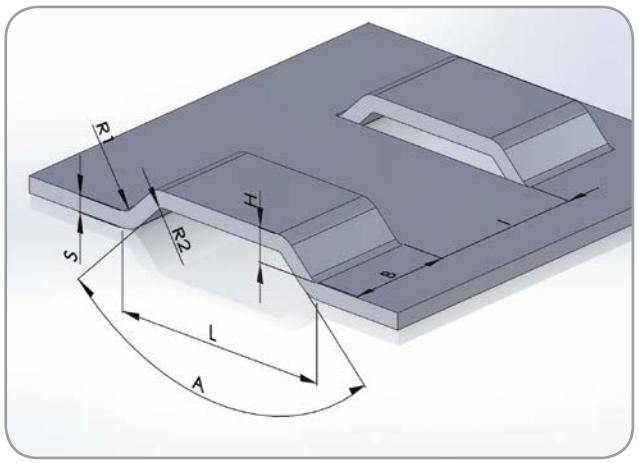
SINGLE AND DOUBLE BRIDGE

Sheet thickness 0.5 - 2.5 mm

Notes and personal drafts. Please specify here the distance of any close deformation.

ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:



Custom dimensions (mm)

A:
B:
H:
S:
I:
R1:
R2:

TYPE: DOUBLE SINGLE

Geminus Coating: Yes No

SIZE	PUNCH*	€	URETHAN STRIPPER	€	DIE ASSEMBLY	€	ALIGN. RING	€	SET
0 - 18 mm	FLTRB17P1		FLTRB17-18E1		FLTRB17M		(GR1)		
18.1 - 40 mm	FLTRB17P2		FLTRB17-18E2		FLTRB17M		(GR2)		
0 - 18 mm DOUBLE	FLTRB18P1		FLTRB17-18E1		FLTRB18M		(GR1)		
18.1 - 40 mm DOUBLE	FLTRB18P2		FLTRB17-18E2		FLTRB18M		(GR2)		

PUNCH WITH EJECTOR + €

ADD € *PUNCH,* € *DIE*

ADD-ONS PAG 136

BEADING CONTINUOUS TOOL

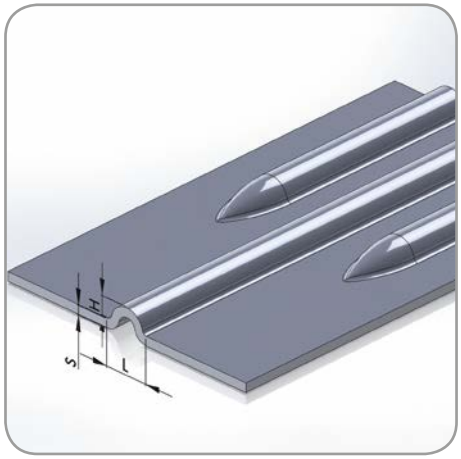
Thickness 0.8 - 3 mm
Height 2, 3, 4, 5 mm, Feed 1 - 2 mm

Notes and personal drafts. Please specify here the distance of any close deformation.

ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:

SOLID DIE



Custom dimensions (mm)

H:
S:
L:

DIE WITH SPRINGS

RIB TOOL

Thickness 0.8 - 2.5 Aluminium, 0.8 - 2 Mild steel, 0.8 - 1.5 Stainless steel
Minimum radius 25 mm
Width 5 - 6 mm

ITEM	PUNCH	€	DIE GR2	€	ALIGN.RING	€	SET
BEADING CONTINUOS TOOL	EMBOSS PUNCH FLTRB29P		EMBOSS SOLID DIE FLTRB29M		(GR2)		
BEADING CONTINUOS TOOL			EMBOSS DIE WITH SPRINGS FLTRB29M2				
WHEEL TOOL	WHEEL PUNCH FLTRB29P2		WHEEL DIE FLTRB29M3				

ADD-ONS PAG 136

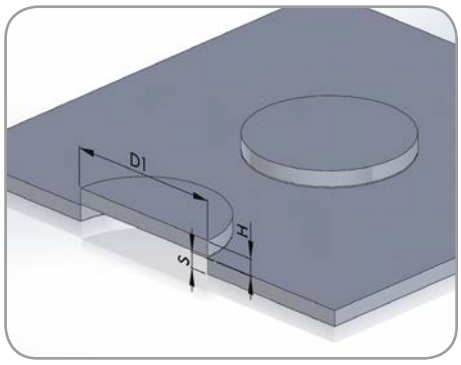
SHEAR BUTTON

Thickness 1 - 3 mm
Height 0.5 x thickness

Notes and personal drafts. Please specify here the distance of any close deformation.

ORDERING SPECIFICATIONS

Company:
Machine model:
Material:
Thickness :
Order / Offer :
Item required:
Number of previous order:



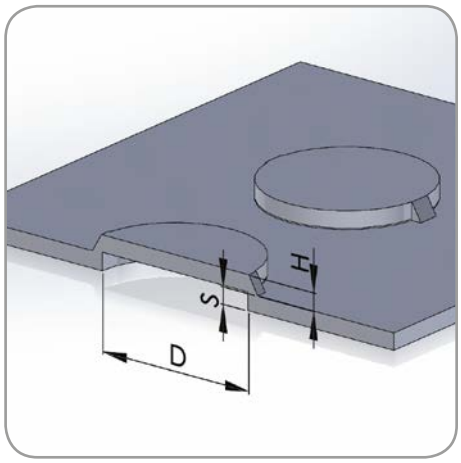
Custom dimensions (mm)

D:
H:
S:

SHEAR BUTTON	PUNCH	€	URETHAN STRIPPER	€	DIE ASSEMBLY GR1	€	ALIGN.RING	€	SET
D 1.9, 2.9, 3.9, 4.9, 5.9	FLTRB15BP		FLTRB12E		FLTRB15M1		(GR1)		

KNOCK OUT ROUND

Sheet thickness 1 - 2 mm



Custom dimensions (mm)

D:
H:
S:

D SIZE	PUNCH	€	DIE ASSEMBLY	€	URETHAN STRIPPER	€	ALIGN.RING	€	SET
0 - 8 mm	FLTRB15PB		FLTRB15M1(GR1)		FLTRB15E		(GR1)		
8.1 - 15 mm	FLTRB15PB		FLTRB15M2B		FLTRB15E		(GR1)		
15.1 - 25 mm	FLTRB15PC		FLTRB12M2C		FLTRB15EC		(GR2)		
25.1 - 42 mm	FLTRB15PE		FLTRB12M2E		FLTRB15EE		(GR2)		

DOUBLE **+ €** *TRIPLE* **+ €**

ADD-ONS PAG 136

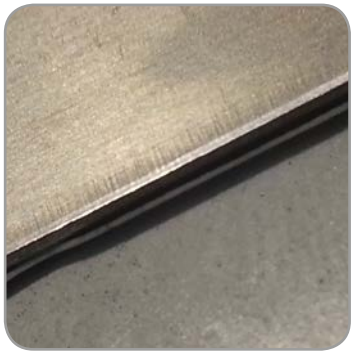
THREAD FORM AFTER PRE PIERCE

Sheet thickness 0.8 - 1.5 mm

Thread	Pitch	Thickness
3.3	1.3	0.8 - 1.2 mm
3.5	1.3	0.8 - 1.2 mm
3.9	1.4	0.9 - 1.3 mm
4.2	1.4	0.9 - 1.3 mm
4.8	1.6	1 - 1.5 mm

THREAD FORM AFTER PRE PIERCE	PUNCH	€	DIE	€	ALIGN.RING	€	SET
	FLTRB31P		FLTRB31M		(GR1)		

DEBURRING AND MARKING ENDLESS



HOLDER DEBURRING ASSEMBLY WITH SPHERE	PUNCH	€	DIE ASSEMBLY WITH SPHERE	€	ALIGN.RING	€	SET
	FLTRB35PD		FLTRB35M		(GR2)		

HOLDER MARKING	PUNCH	€	DIAMOND 120° (MS. SS)	€	DIAMOND 150° (AL - GA)	€	DIE ASSEMBLY WITH SPHERE	€	ALIGN. RING	€
	FLTRB35PM		FLTRB35D120		FLTRB35D150		FLTRB35M		(GR2)	

CARD GUIDE

CARD GUIDE	PUNCH	€	DIE ASSEMBLY	€	ALIGN.RING	€	SET
0 - 60 mm	FLTRB34P		FLTRB34M		(GR2)		

ADD-ONS PAG 136

MARKING TOOL ALPHA NUMERIC

MARKING TOOL ALPHA NUMERIC	PUNCH HOLDER	€	DIE	€	ALIGN.RING	€	SET
	FLTRB26PR		FLTRC1MAT001T		(HD 40 mm)		

FORMED STAMPING LOGO

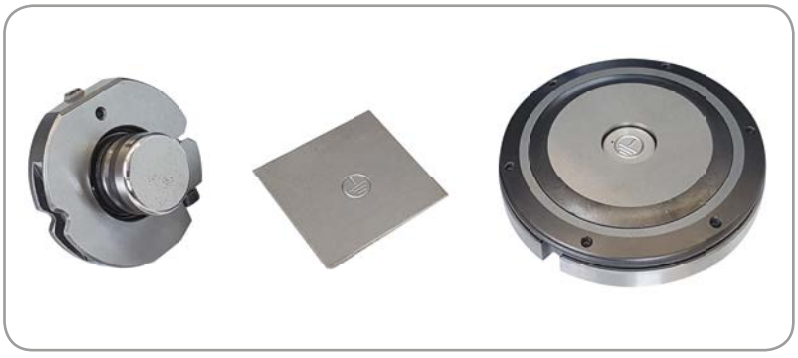
Embossed Logo

Marked Logo

FORMED STAMPING LOGO	PUNCH	€	DIE	€	ALIGN.RING	€	SET
EMBOSSED	FLTRB26P		FLTRB26M		(GR2)		
MARKED	FLTRB26P		FLTRC1MAT001T		(GR2)		

MARKING GROUND SYMBOL DIN40011

Marking Depth: 0.4 - 0.6 mm



MARKING DEPTH: 0.4 - 0.6 mm	PUNCH	€	DIE	€	ALIGN.RING	€	SET
From the top	FLTRB27P		TRA1MAT001T		(GR1)		
From the bottom	TRA1PUT006T		FLTRB27M		(GR1)		

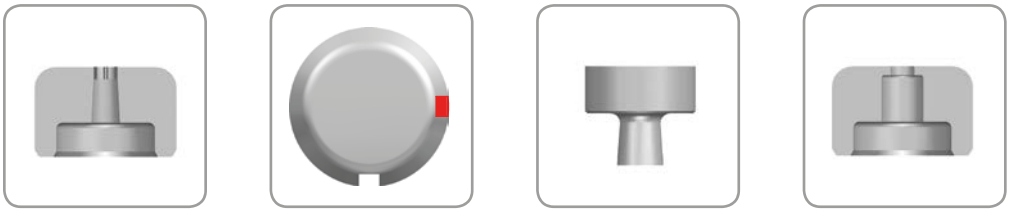
ADD-ONS PAG 136

ADD ON

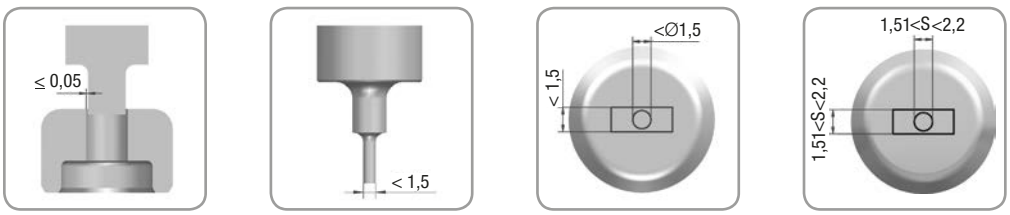
Shear option

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 lenght	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	€	€	+ 20%	€
WHEN	Best option to prevent the come out of the slug	Special, machines without rotation (C-D-E thick turret dies keys 0-90 standard shape 0-135 square)	Recommended for punching thick material, more than 4mm. Needful with punches that work with urethane *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 <0.1	Punch width size <1.5	Die size <1.5	1,51 < Die size < 2,2
ADD ON	+25 %	+25 %	+25 %	+10 %

ADD-ONS PAG 136