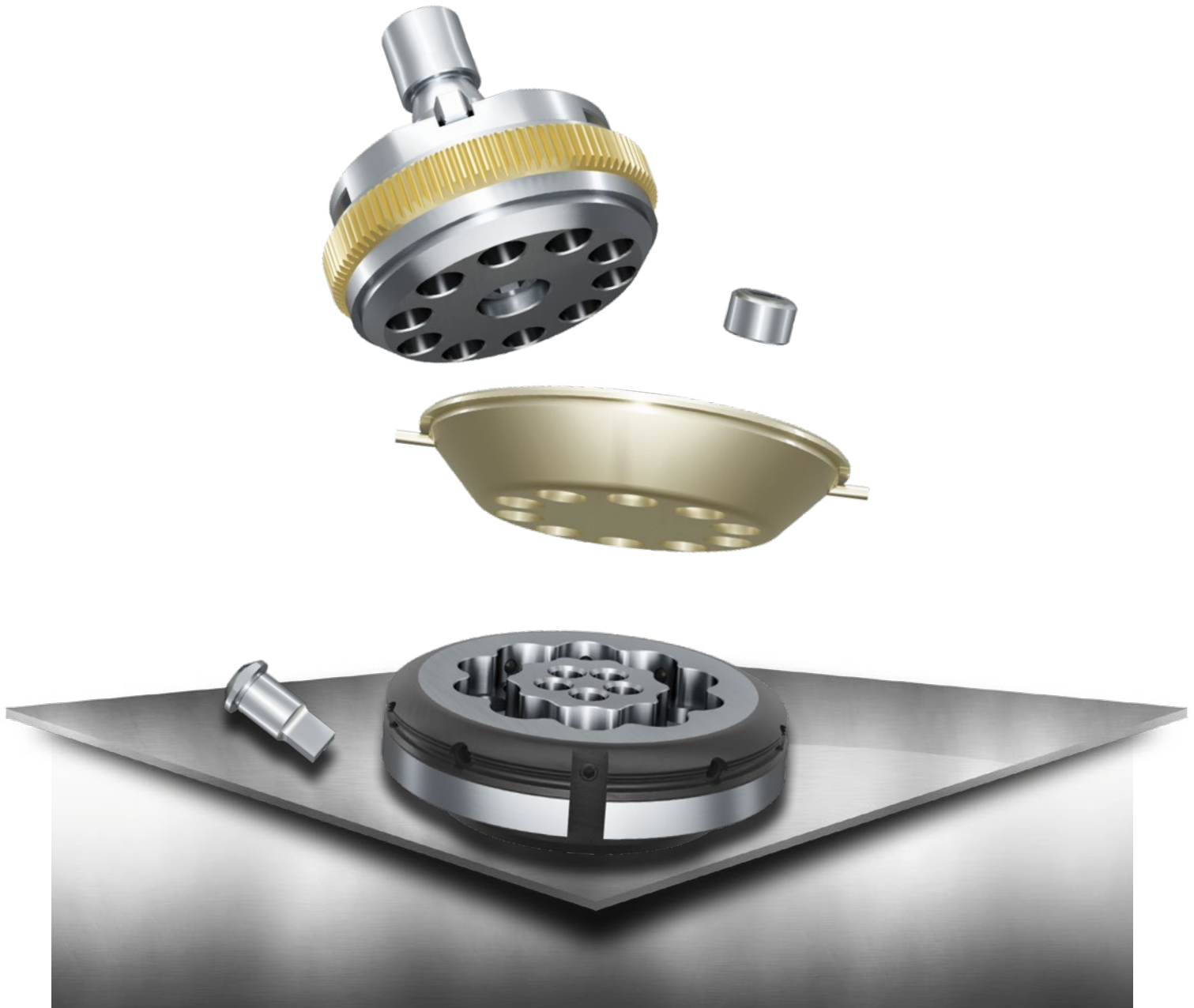




CATALOG 03/2023-VVV-T.1

SYSTEM TRUMPF

CATALOG 03/2023-WW-T.1



SCOPE OF APPLICATION:

Deliveries and services provided by PASS Stanztechnik AG are effected exclusively according to PASS delivery and payment conditions. These conditions shall be deemed accepted at the latest upon receipt of the goods or services.

GENERAL REMARKS:

You can find our general terms and conditions on our Homepage under: www.pass-ag.com

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PASS TOOLS SIZE 3 AND SPECIFIC TOOLING FOR BOSCHERT PUNCHING MACHINES

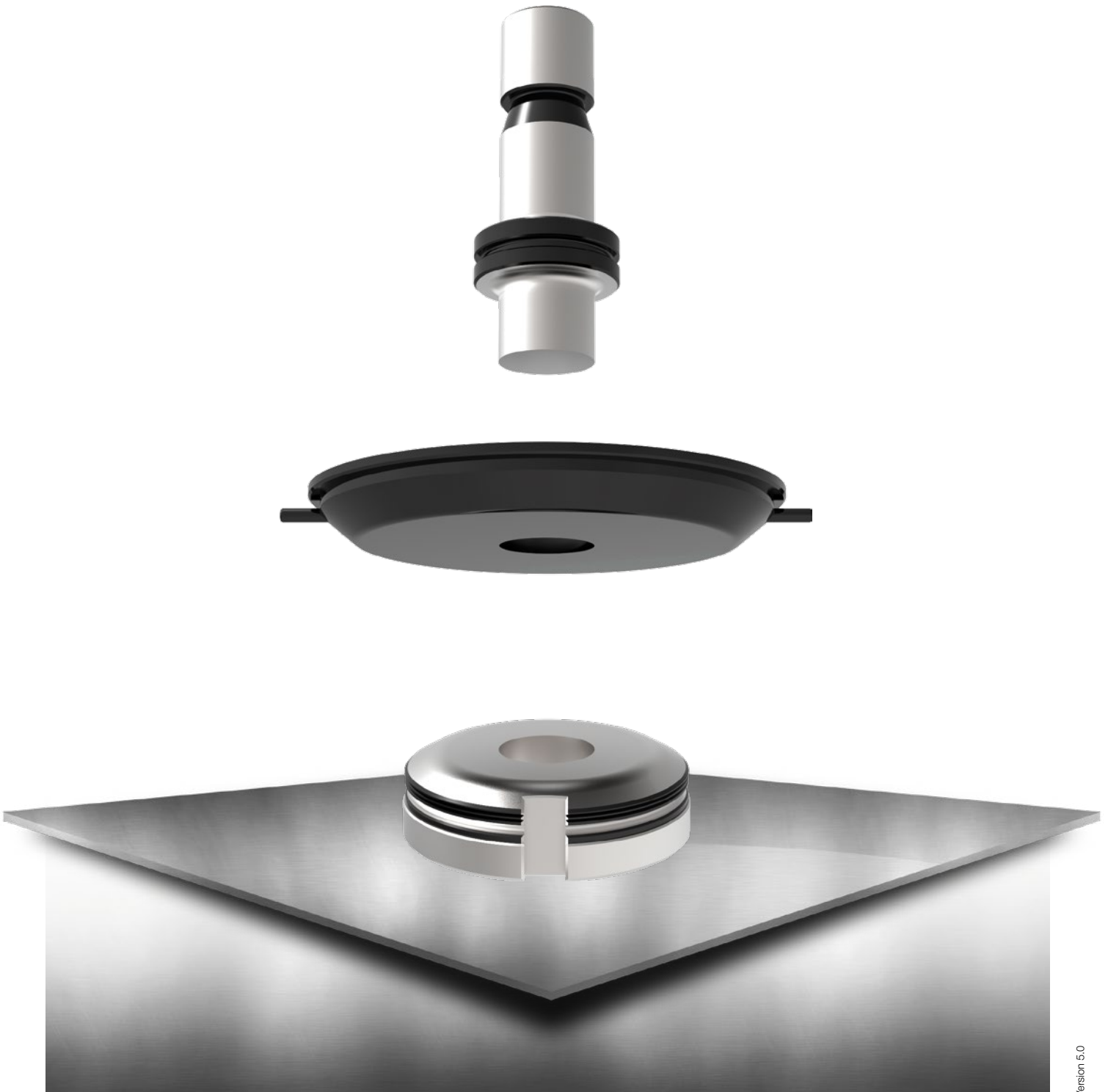
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RE-EXPERIENCE THE STANDARD: STANDARD TOOLS

PASS TOOLS FOR YOUR
TRUMPF SYSTEM

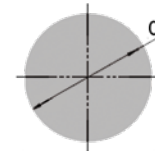
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STANDARD TOOLS ROUND



SIZE	DIM. D	PART-NO.
PUNCH (H-PM®)		
0	1,00 - 6,00	107A01C
0	6,01 - 10,50 ⁽¹⁾	107B01C
1	1,00 - 30,50	101111C
2	30,51 - 40,00	101211C
2	40,01 - 50,80	101221C
2	50,81 - 60,00	101231C
2	60,01 - 72,00	101241C
2	72,01 - 76,20	101251C
Reinforced	1,00 - 30,50	108111C
Reinforced	30,51 - 40,00	108121C
STRIPPER		
2	1,00 - 78,00	112211C
DIE (HWS)		
1 ⁽²⁾	1,00 - 32,00	106111C
2 ⁽³⁾	32,01 - 77,00	106211C
1 reinforced ⁽²⁾	1,00 - 32,00	109111C
2 reinforced ⁽³⁾	32,01 - 42,00	109221C
2 reinforced ⁽³⁾	42,01 - 62,00	109231C



Additional costs:

PUNCH

Punches with shear (WT / DOWT / etc.) -> see page 66

⁽¹⁾ Smaller 6,00 mm

Cutting part under 1,00 mm

X3-PM quality -> see page 70

Cross references:

PUNCH

Fully guided punch	14
Adjusting rings	44
Punch chuck	45
Additional costs for coating	64
Polished cutting part	65

STRIPPER

PU coating for low-scratch material handling

STRIPPER

Spare parts	62
PU stripper	59

DIE

⁽²⁾ H-PM® quality

⁽³⁾ H-PM® quality

Slug-stop version (negative cutting)

Brush version for low-scratch material handling

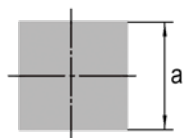
X8-PM quality -> see page 70

DIE

Adapter rings	45
Compensating rings	47
RTC cartridge and die carrier	50
Keyway clamps	62
Slug-snap version (for slug-problems)	67

STANDARD TOOLS SQUARE

	SIZE	DIM. A	PART-NO.
PUNCH (H-PM®)			
	0	1,00 - 4,20	107A02C
	0	4,21 - 7,40 ^(*)	107B02C
	1	1,00 - 21,55	101112C
	2	21,56 - 28,25	101212C
	2	28,26 - 35,90	101222C
	2	35,91 - 42,40	101232C
	2	42,41 - 50,90	101242C
	2	50,91 - 53,90	101252C
	Reinforced	1,00 - 21,55	108112C
	Reinforced	21,56 - 28,25	108122C
STRIPPER			
	2	1,00 - 56,00	112212C
DIE (HWS)			
	1 ^(**)	1,00 - 22,50	106112C
	2 ^(***)	22,51 - 54,90	106212C
	1 reinforced ^(**)	1,00 - 22,50	109112C
	2 reinforced ^(**)	22,51 - 30,20	109222C
	2 reinforced ^(**)	30,21 - 43,00	109232C



Additional costs:

PUNCH

Punches with shear (WT / DOWT / etc.) -> see page 66

^(*) Smaller 4,20 mm

Cutting part under 1,00 mm

4 x same corner radius

X3-PM quality -> see page 70

STRIPPER

PU coating for low-scratch material handling

DIE

^(**) H-PM® quality

^(***) H-PM® quality

Slug-stop version (negative cutting)

Additional keyway

Brush version for low-scratch material handling

X8-PM quality -> see page 70

Cross references:

PUNCH

Fully guided punch	15
Adjusting rings	44
Punch chuck	45
ps:®passfit - explanation and additional costs	49
Additional costs for coating	64
Polished cutting part	65

STRIPPER

Spare parts	62
Push-out stripper	63
PU stripper	59

DIE

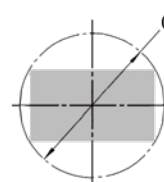
Adapter rings	45
Compensating rings	47
RTC cartridge and die carrier	50
Keyway clamps	62
Slug-snap version (for slug-problems)	67

see page

STANDARD TOOLS RECTANGLE



SIZE	DIM. D	PART-NO.
PUNCH (H-PM®)		
0	1,00 - 6,00	107A03C
0	6,01 - 10,50 ⁽¹⁾	107B03C
1	1,00 - 30,50	101113C
2	30,51 - 40,00	101213C
2	40,01 - 50,80	101223C
2	50,81 - 60,00	101233C
2	60,01 - 72,00	101243C
2	72,01 - 76,20	101253C
Reinforced	1,00 - 30,50	108113C
Reinforced	30,51 - 40,00	108123C
STRIPPER		
2	1,00 - 78,00	112213C
DIE (HWS)		
1 ⁽²⁾	1,00 - 32,00	106113C
2 ⁽³⁾	32,01 - 77,00	106213C
1 reinforced ⁽²⁾	1,00 - 32,00	109113C
2 reinforced ⁽³⁾	32,01 - 42,00	109223C
2 reinforced ⁽³⁾	42,01 - 62,00	109233C



Additional costs:

PUNCH

Punches with shear (WT / DOWT / etc.) -> see page 66

⁽¹⁾ Smaller 6,00 mm

Cutting part under 1,00 mm

4 x same corner radius

X3-PM quality -> see page 70

STRIPPER

PU coating for low-scratch material handling

DIE

⁽²⁾ H-PM® quality

⁽³⁾ H-PM® quality

Slug-stop version (negative cutting)

Additional keyway

Brush version for low-scratch material handling

X8-PM quality -> see page 70

Cross references:

PUNCH

Fully guided punch	15
Slitting punches for slittings close to embossing	32 - 33
Adjusting rings	44
Punch chuck	45
ps:®passfit - explanation and additional costs	49
Additional costs for coating	64
Polished cutting part	65

STRIPPER

Spare parts	62
Push-out stripper	63
PU stripper	59

DIE

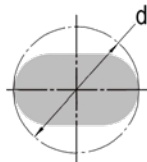
Adapter rings	45
Compensating rings	47
RTC cartridge and die carrier	50
Keyway clamps	62
Slug-snap version (for slug-problems)	67

STANDARD TOOLS OBLONG

SIZE	DIM. D	PART-NO.
PUNCH (H-PM®)		
0	1,00 - 6,00	107A04C
0	6,01 - 10,50 ^(*)	107B04C
1	1,00 - 30,50	101114C
2	30,51 - 40,00	101214C
2	40,01 - 50,80	101224C
2	50,81 - 60,00	101234C
2	60,01 - 72,00	101244C
2	72,01 - 76,20	101254C
Reinforced	1,00 - 30,50	108114C
Reinforced	30,51 - 40,00	108124C

STRIPPER		
2	1,00 - 78,00	112214C

DIE (HWS)		
1 ⁽²⁾	1,00 - 32,00	106114C
2 ⁽³⁾	32,01 - 77,00	106214C
1 reinforced ⁽²⁾	1,00 - 32,00	109114C
2 reinforced ⁽³⁾	32,01 - 42,00	109224C
2 reinforced ⁽³⁾	42,01 - 62,00	109234C



Additional costs:

PUNCH

Punches with shear (WT / DOWT / etc.) -> see page 66

^(*) Smaller 6,00 mm

Cutting part under 1,00 mm

X3-PM quality -> see page 70

STRIPPER

PU coating for low-scratch material handling

DIE

⁽²⁾ H-PM® quality

⁽³⁾ H-PM® quality

Slug-stop version (negative cutting)

Additional keyway

Brush version for low-scratch material handling

X8-PM quality -> see page 70

Cross references:

PUNCH

Fully guided punch	15
Slitting punches for slittings close to embossing	32 - 33
Adjusting rings	44
Punch chuck	45
ps:®passfit - explanation and additional costs	49
Additional costs for coating	64
Polished cutting part	65

STRIPPER

Spare parts	62
Push-out stripper	63
PU stripper	59

DIE

Adapter rings	45
Compensating rings	47
RTC cartridge and die carrier	50
Keyway clamps	62
Slug-snap version (for slug-problems)	67

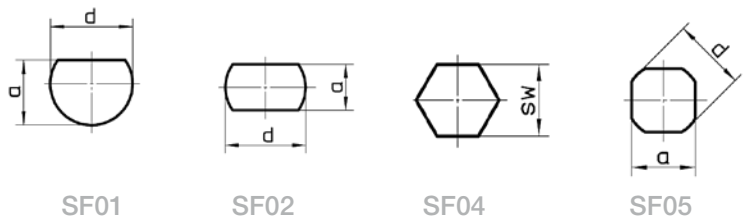
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SPECIAL SHAPE TOOLS GROUP 1

(SF01, SF02, SF04, SF05)



SIZE	DIM. D	PART-NO.
PUNCH (H-PM®)		
0	1,00 - 6,00	121A0_C1
0	6,01 - 10,50 ⁽¹⁾	121B0_C1
1	1,00 - 30,50	12111_C1
2	30,51 - 40,00	12121_C1
2	40,01 - 50,80	12122_C1
2	50,81 - 60,00	12123_C1
2	60,01 - 72,00	12124_C1
2	72,01 - 76,20	12125_C1
Reinforced	1,00 - 30,50	V2111_C1
Reinforced	30,51 - 40,00	121V1_C1
STRIPPER		
2	1,00 - 78,00	127H1_C1
DIE (HWS)		
1 ⁽²⁾	1,00 - 32,00	12611_C1
2 ⁽³⁾	32,01 - 77,00	12621_C1
1 reinforced ⁽²⁾	1,00 - 32,00	V2611_C1
2 reinforced ⁽³⁾	32,01 - 42,00	126V1_C1
2 reinforced ⁽³⁾	42,01 - 62,00	126V2_C1



Additional costs:	Cross references:	see page
PUNCH	PUNCH	
Punches with shear (WT / DOWT / etc.) -> see page 66	Fully guided punch	15
⁽¹⁾ Smaller 6,00 mm	Adjusting rings	44
Cutting part under 1,00 mm	Punch chuck	45
X3-PM quality -> see page 70	ps:®passfit - explanation and additional costs	49
	Additional costs for coating	64
	Polished cutting part	65
STRIPPER	STRIPPER	
PU coating for low-scratch material handling	Spare parts	62
	PU stripper	59
DIE	DIE	
⁽²⁾ H-PM® quality	Adapter rings	45
⁽³⁾ H-PM® quality	Compensating rings	47
Slug-stop version (negative cutting)	RTC cartridge and die carrier	50
Additional keyway	Keyway clamps	62
Brush version for low-scratch material handling	Slug-snap version (for slug-problems)	67
X8-PM quality -> see page 70		

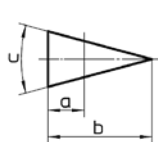
SPECIAL SHAPE TOOLS GROUP 2

(SF03, SF07, SF13, SF17)

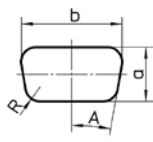
SIZE	DIM. D	PART-NO.
PUNCH (H-PM®)		
0	1,00 - 6,00	121A0_C2
0	6,01 - 10,50 ^(*)	121B0_C2
1	1,00 - 30,50	12111_C2
2	30,51 - 40,00	12121_C2
2	40,01 - 50,80	12122_C2
2	50,81 - 60,00	12123_C2
2	60,01 - 72,00	12124_C2
2	72,01 - 76,20	12125_C2
Reinforced	1,00 - 30,50	V2111_C2
Reinforced	30,51 - 40,00	121V1_C2

STRIPPER		
2	1,00 - 78,00	127H1_C2

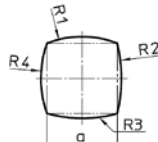
DIE (HWS)			
1 ^(**)	1,00 - 32,00	12611_C2	
2 ^(***)	32,01 - 77,00	12621_C2	
1 reinforced ^(**)	1,00 - 32,00	V2611_C2	
2 reinforced ^(***)	32,01 - 42,00	126V1_C2	
2 reinforced ^(***)	42,01 - 62,00	126V2_C2	



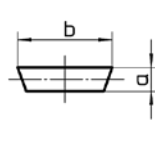
SF03



SF07



SF13



SF17



Additional costs:

PUNCH

Punches with shear (WT / DOWT / etc.) -> see page 6666

^(*) Smaller 6,00 mm

Cutting part under 1,00 mm

X3-PM quality -> see page 70

STRIPPER

PU coating for low-scratch material handling

DIE

^(**) H-PM® quality

^(***) H-PM® quality

Slug-stop version (negative cutting)

Additional keyway

Brush version for low-scratch material handling

X8-PM quality -> see page 70

Cross references:

PUNCH

Fully guided punch	15
Slitting punches for slittings close to embossing	32 - 33
Adjusting rings	44
Punch chuck	45
ps:®passfit - explanation and additional costs	49
Additional costs for coating	64
Polished cutting part	65

STRIPPER

Spare parts	62
Push-out stripper	63
PU stripper	59

DIE

Adapter rings	45
Compensating rings	47
RTC cartridge and die carrier	50
Keyway clamps	62
Slug-snap version (for slug-problems)	67

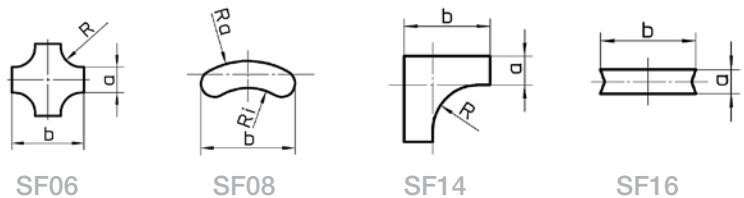
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SPECIAL SHAPE TOOLS GROUP 3

(SF06, SF08, SF14, SF16)



SIZE	DIM. D	PART-NO.
PUNCH (H-PM®)		
0	1,00 - 6,00	121A0_C3
0	6,01 - 10,50 ⁽¹⁾	121B0_C3
1	1,00 - 30,50	12111_C3
2	30,51 - 40,00	12121_C3
2	40,01 - 50,80	12122_C3
2	50,81 - 60,00	12123_C3
2	60,01 - 72,00	12124_C3
2	72,01 - 76,20	12125_C3
Reinforced	1,00 - 30,50	V2111_C3
Reinforced	30,51 - 40,00	121V1_C3
STRIPPER		
2	1,00 - 78,00	127H1_C3
DIE (HWS)		
1 ⁽²⁾	1,00 - 32,00	12611_C3
2 ⁽³⁾	32,01 - 77,00	12621_C3
1 reinforced ⁽²⁾	1,00 - 32,00	V2611_C3
2 reinforced ⁽³⁾	32,01 - 42,00	126V1_C3
2 reinforced ⁽³⁾	42,01 - 62,00	126V2_C3

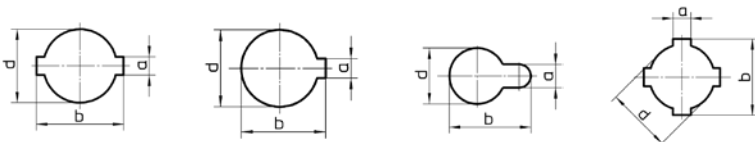


Additional costs:	Cross references:	see page
PUNCH	PUNCH	
Punches with shear (WT / DOWT / etc.) -> see page 66	Fully guided punch	15
⁽¹⁾ Smaller 6,00 mm	Slitting punches for slittings close to embossing	32 - 33
Cutting part under 1,00 mm	Adjusting rings	44
X3-PM quality -> see page 70	Punch chuck	45
	ps:®passfit - explanation and additional costs	49
	Additional costs for coating	64
	Polished cutting part	65
STRIPPER	STRIPPER	
PU coating for low-scratch material handling	Spare parts	62
	Push-out stripper	63
	PU stripper	59
DIE	DIE	
⁽²⁾ H-PM® quality	Adapter rings	45
⁽³⁾ H-PM® quality	Compensating rings	47
Slug-stop version (negative cutting)	RTC cartridge and die carrier	50
Additional keyway	Keyway clamps	62
Brush version for low-scratch material handling	Slug-snap version (for slug-problems)	67
X8-PM quality -> see page 70		

SPECIAL SHAPE TOOLS GROUP 4

(SF09, SF10, SF11, SF12)

	SIZE	DIM. D	PART-NO.
PUNCH (H-PM®)			
	0	1,00 - 6,00	121A0_C4
	0	6,01 - 10,50 ^(*)	121B0_C4
	1	1,00 - 30,50	12111_C4
	2	30,51 - 40,00	12121_C4
	2	40,01 - 50,80	12122_C4
	2	50,81 - 60,00	12123_C4
	2	60,01 - 72,00	12124_C4
	2	72,01 - 76,20	12125_C4
	Reinforced	1,00 - 30,50	V2111_C4
	Reinforced	30,51 - 40,00	121V1_C4
STRIPPER			
	2	1,00 - 78,00	127H1_C4
DIE (HWS)			
	1 ^(**)	1,00 - 32,00	12611_C4
	2 ^(***)	32,01 - 77,00	12621_C4
	1 reinforced ^(**)	1,00 - 32,00	V2611_C4
	2 reinforced ^(***)	32,01 - 42,00	126V1_C4
	2 reinforced ^(***)	42,01 - 62,00	126V2_C4



SF09

SF10

SF11

SF12

Additional costs:

PUNCH

Punches with shear (WT / DOWT / etc.) -> see page 66

^(*) Smaller 6,00 mm

Cutting part under 1,00 mm

X3-PM quality -> see page 70

Cross references:

PUNCH

Fully guided punch	15
Adjusting rings	44
Punch chuck	45
ps:®passfit - explanation and additional costs	49
Additional costs for coating	64
Polished cutting part	65

see page

STRIPPER

PU coating for low-scratch material handling

STRIPPER

Spare parts	62
PU stripper	59

DIE

^(**) H-PM® quality

^(***) H-PM® quality

Slug-stop version (negative cutting)

Additional keyway

Brush version for low-scratch material handling

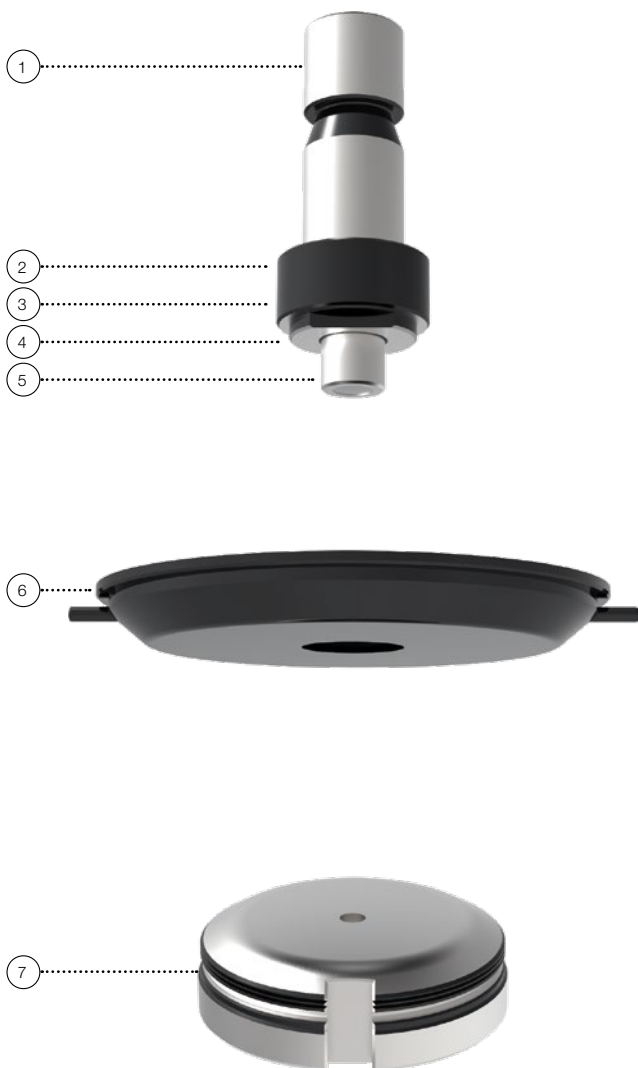
X8-PM quality -> see page 70

DIE

Adapter rings	45
Compensating rings	47
RTC cartridge and die carrier	50
Keyway clamps	62
Slug-snap version (for slug-problems)	67

PUNCH WITH GUIDED CUTTING PART - ROUND

FOR ROUND PUNCH (DIMENSION D = 0,50 MM – 6,00 MM / 6,01 MM – 10,50 MM)



DESCRIPTION	POSITION	PART-NO.
UP TO 6,00 MM		
Complete upper part	1 - 5	1S160A
Stripper round 26 mm	6	112211C26
Die (HWS) ⁽²⁾	7	106111C

SPARE PARTS		
Spare punch needle (H-PM [®])	2	1S16SA
Spare spring	3	1S1608
Spare guide	5	1S1603
Spare clamp nut	4	1S1607

UP TO 10,50 MM		
Complete upper part ⁽¹⁾	1 - 5	1S160B
Stripper round 26 mm	6	112211C26
Die (HWS) ⁽²⁾	7	106111C

SPARE PARTS		
Spare punch needle (H-PM [®]) ⁽¹⁾	2	1S16SB
Spare spring	3	1S1609
Spare guide	5	1S1604
Spare clamp nut	4	1S1607

Additional costs:

PUNCH

⁽¹⁾ Smaller 6,00 mm

Cutting part under 1,00 mm

Cross references:

PUNCH

Standard round punch

Suitable adjusting ring - part-no. 118101

Punch chuck

Additional costs for coating (such as size 0)

Polished cutting part (such as size 0)

see page

6

44

45

64

65

STRIPPER

PU coating for low-scratch material handling

STRIPPER

Spare parts

62

DIE

⁽²⁾ H-PM[®] quality

Brush version for low-scratch material handling

DIE

Adapter rings

Compensating rings

RTC cartridge and die carrier

Slug-snap version (for slug-problems)

45

47

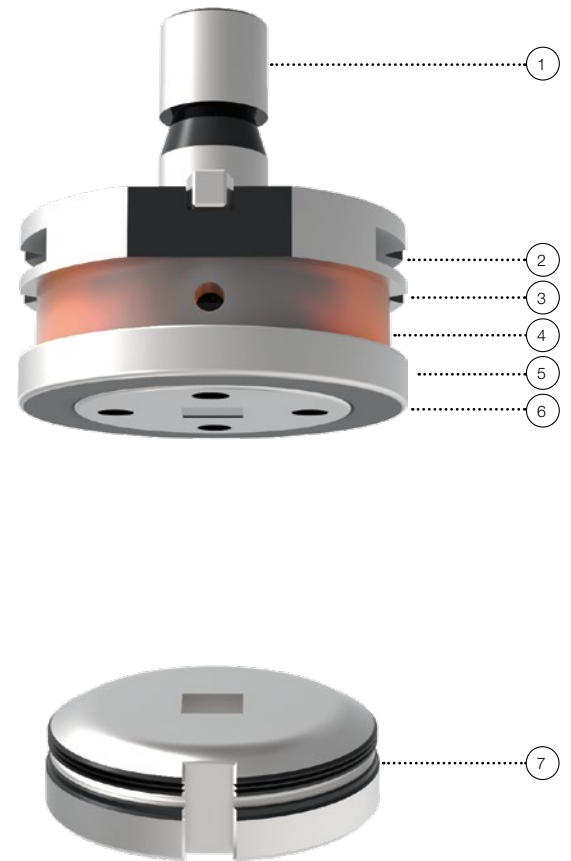
50

67

PUNCH WITH GUIDED CUTTING PART - FORM

FOR FORM PUNCH (DIMENSION D = 0,50 MM – 16,00 MM)

DESCRIPTION	POSITION	PART-NO.
SQUARE		
Complete upper part	1 - 6	1S16502
Spare punch insert (H-PM®)	3	1S16532
Spare spring	4	1S16540
Spare guide	6	1S16562
Die (HWS) ⁽²⁾	7	106112C
RECTANGLE		
Complete upper part	1 - 6	1S16503
Spare punch insert (H-PM®)	3	1S16533
Spare spring	4	1S16540
Spare guide	6	1S16563
Die (HWS) ⁽²⁾	7	106113C
OBLONG		
Complete upper part	1 - 6	1S16504
Spare punch insert (H-PM®)	3	1S16534
Spare spring	4	1S16540
Spare guide	6	1S16564
Die (HWS) ⁽²⁾	7	106114C
SPECIAL SHAPES		
Complete upper part	1 - 6	on request
Spare punch insert (H-PM®)	3	on request
Spare spring	4	on request
Spare guide	6	on request
Die (HWS) ⁽²⁾	7	on request



Additional costs:	Cross references:	see page
PUNCH	PUNCH	
Cutting part under 1,00 mm	Standard punch	from 7
	Punch chuck	45
	Additional costs for coating (such as size 1)	64
	Polished cutting part (such as size 1)	65
STRIPPER	STRIPPER	
Polished version for low-scratch material handling	Spare parts	62
DIE	DIE	
⁽²⁾ H-PM® quality	Adapter rings	45
Brush version for low-scratch material handling	Compensating rings	47
	RTC cartridge and die carrier	50
	Keyway clamps	62
	Slug-snap version (for slug-problems)	67



BEING MULTILATERAL: MULTITOOLS

PASS TOOLS FOR YOUR
TRUMPF SYSTEM

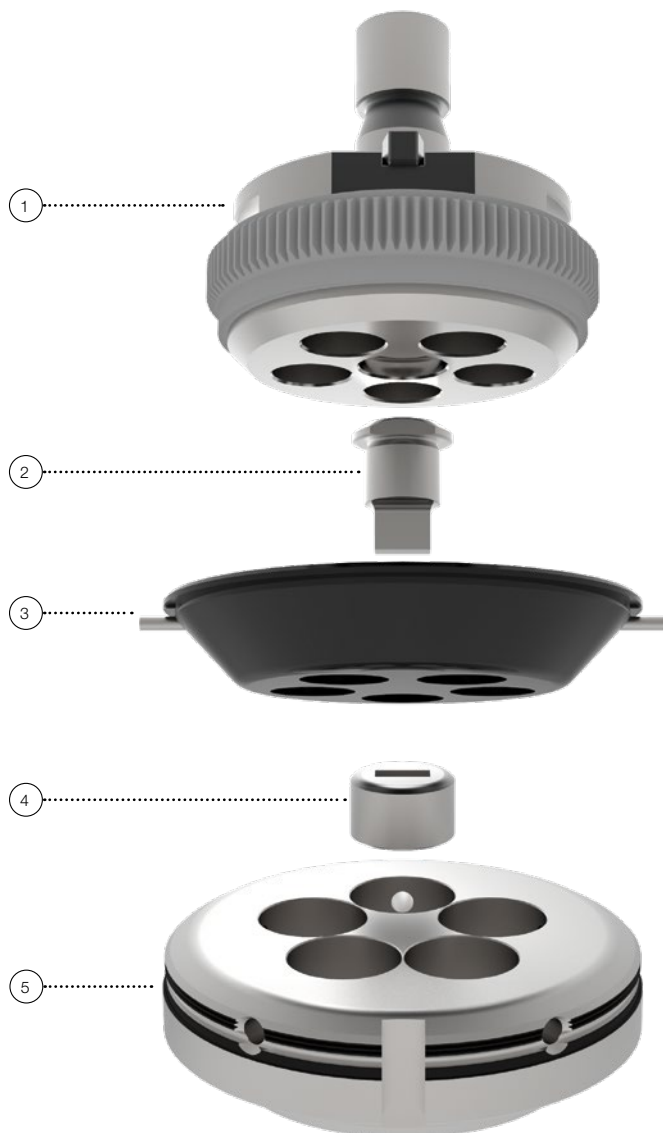
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ps:®MT10-TP for punching	page 19
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Multitool 6-station	page 21
ps:®MT10-TP Cutting die	page 22

ps:®MT5-TP FOR PUNCHING

FOR MACHINE GROUP I (DIMENSION 1,00 MM – 16,00 MM)

(TRUPUNCH1000, 2000, 2020, 3000, 5000 TRUMATIC1000, 3000, 6000, 7000)



DESCRIPTION	POSITION	PART-NO.
PUNCH HOLDER		
Punch holder	1	113S30
PUNCH (H-PM®)		
Round	2	113N31
Square	2	113N32
Rectangle	2	113N33
Oblong	2	113N34
Special shape	2	on request
STRIPPER		
Round 17	3	115A30
With PU surface round 17	3*	115PU30
With customized shape	3*	115B30
DIES (H-PM®)		
Round	4	114031
Square	4	114032
Rectangle	4	114033
Oblong	4	114034
Special shape	4	on request
DIE HOLDER		
Die holder	5	114Z30

* no picture

Details / Additional costs:

PUNCH HOLDER AND PUNCH INSERT

Max. sheet thickness - steel and alu up to 4,50 mm / stainless steel up to 3,00 mm
Cutting part under 1,00 mm

Cross references:

PUNCH

Types of special shapes 10 - 13
Additional costs for coating (Multitool) 64
Polished cutting part (Multitool) 65

see page

STRIPPER

Polished version for low-scratch material handling

STRIPPER

Spare parts

62

DIE

Slug-stop version (negative cutting)
Brush version for low-scratch material handling

Set of shims:
(2xt = 0,1 mm / 2xt = 0,3 mm / 2xt = 0,5 mm) - part-no. 114U3M

DIE

RTC cartridge and die carrier
Slug-snap version (for slug-problems)

50

67

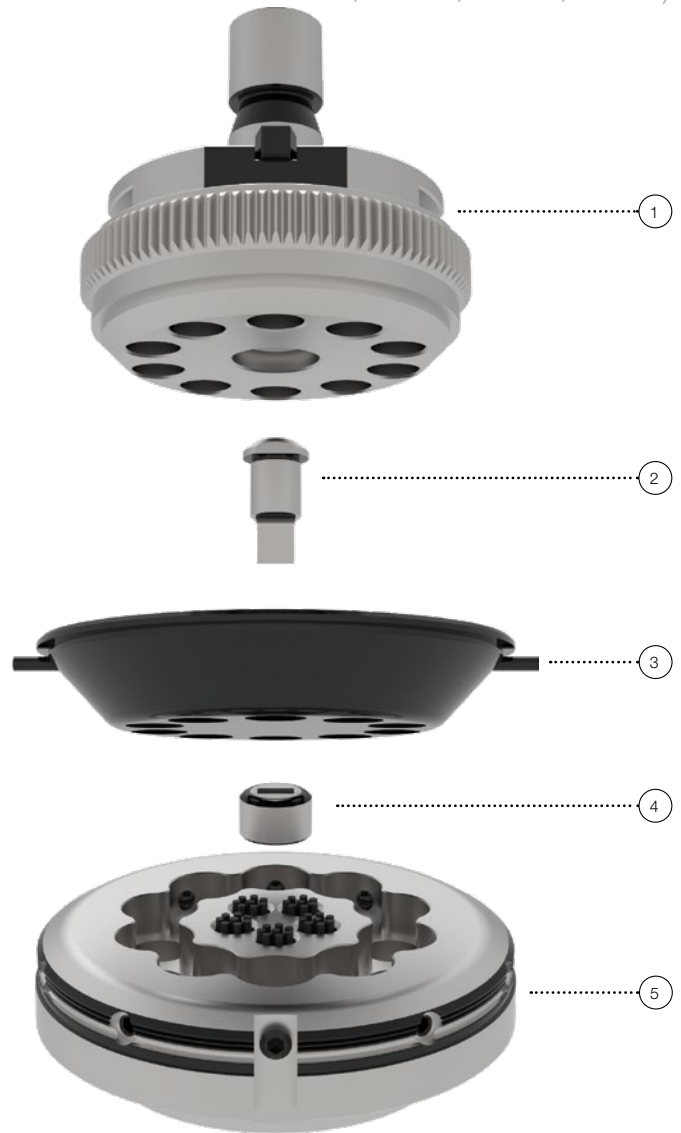
ps:®MT10-TP FOR PUNCHING

FOR MACHINE GROUP I (DIMENSION 1,00 MM – 10,50 MM)

(TRUPUNCH1000, 2000, 2020, 3000, 5000 TRUMATIC1000, 3000, 6000, 7000)

DESCRIPTION	POSITION	PART-NO.
PUNCH HOLDER		
Punch holder	1	113S40
PUNCH INSERT (H-PM®)		
Round	2	113N41
Square	2	113N42
Rectangle	2	113N43
Oblong	2	113N44
Special shape	2	on request
STRIPPER		
Round 12	3	115A40
with PU surface round 12	3'	115PU40
With customized shape	3*	115B40
DIES (H-PM®)		
Round	4	114041
Square	4	114042
Rectangle	4	114043
Oblong	4	114044
Special shape	4	on request
DIE HOLDER		
Die holder	5	114Z40

* no picture



Details / Additional costs:

PUNCH HOLDER AND PUNCH INSERT

Max. sheet thickness - steel and alu up to 4,50 mm / stainless steel up to 3,00 mm
Cutting part under 1,00 mm

Cross references:

PUNCH

Types of special shapes	10 - 13
Additional costs for coating (Multitool)	64
Polished cutting part (Multitool)	65

see page

STRIPPER

Polished version for low-scratch material handling

STRIPPER

Spare parts

62

DIE

Slug-stop version (negative cutting)
Brush version for low-scratch material handling
Set of shims:
(2xt = 0,1 mm / 2xt = 0,3 mm / 2xt = 0,5 mm) - part-no. 114U4M

DIE

Version as one piece die insert	22
RTC cartridge and die carrier	50
Slug-snap version (for slug-problems)	67

MULTITOOL 4-STATION

FOR MACHINE GROUP H AND TC260 (DIMENSION 1,00 MM – 16,00 MM)
(TC600L, TC500R, TC200R, TC260R, TC260L)



DESCRIPTION	POSITION	PART-NO.
UPPER PART		
Punch holder incl. stripper system	*	on request
PUNCH INSERT (H-PM®)		
Round	2	113N11
Square	2	113N12
Rectangle	2	113N13
Oblong	2	113N14
Special shape	2	on request
STRIPPER ADAPTER		
For all shapes	3	on request
STRIPPER PLATE		
Standard (round)	4	on request
Close-fitting ⁽¹⁾	4*	on request
DIE INSERT (H-PM®)		
Round	5	114011
Square	5	114012
Rectangle	5	114013
Oblong	5	114014
Special shape	5	on request
LOWER PART		
Die holder ⁽²⁾	*	on request

* no picture

Details / Additional costs:

PUNCH HOLDER AND PUNCH INSERT

Max. sheet thickness - steel and alu up to 3,00 mm / stainless steel up to 2,00 mm
Cutting part under 1,00 mm

Cross references:

PUNCH

Types of special shapes	10 - 13
Additional costs for coating (Multitool)	64
Polished cutting part (Multitool)	65

see page

STRIPPER

Polished version for low-scratch material handling

⁽¹⁾ Shapes on customer request

STRIPPER

Spare parts

62

DIE

Slug-stop version (negative cutting)

⁽²⁾ Brush version for low-scratch material handling

Set of shims:

(2xt = 0,1 mm / 2xt = 0,3 mm / 2xt = 0,5 mm) - part-no. 114U1M

DIE

Slug-snap version (for slug-problems)

67

MULTITOOL 6-STATION

FOR MACHINE GROUP H AND TC260 (DIMENSION 1,00 MM – 10,50 MM)
(TC600L, TC500R, TC200R, TC260R, TC260L)

DESCRIPTION	POSITION	PART-NO.
UPPER PART		
Punch holder incl. stripper system	*	on request
PUNCH INSERT (H-PM®)		
Round	2	113N21
Square	2	113N22
Rectangle	2	113N23
Oblong	2	113N24
Special shape	2	on request
STRIPPER ADAPTER		
For all shapes	3	on request
STRIPPER PLATE		
Standard (round)	4	on request
Close-fitting ⁽¹⁾	4*	on request
DIE INSERT (H-PM®)		
Round	5	114021
Square	5	114022
Rectangle	5	114023
Oblong	5	114024
Special shape	5	
LOWER PART		
Die holder ⁽²⁾	*	

* no picture



Details / Additional costs:

PUNCH HOLDER AND PUNCH INSERT

Max. sheet thickness - steel and alu up to 3,00 mm / stainless steel up to 2,00 mm
Cutting part under 1,00 mm

Cross references:

PUNCH

Types of special shapes	10 - 13
Additional costs for coating (Multitool)	64
Polished cutting part (Multitool)	65

see page

STRIPPER

Polished version for low-scratch material handling

⁽¹⁾ Shapes on customer request

STRIPPER

Spare parts

62

DIE

Slug-stop version (negative cutting)

⁽²⁾ Brush version for low-scratch material handling

Set of shims:

(2xt = 0,1 mm / 2xt = 0,3 mm / 2xt = 0,5 mm) - part-no. 114U2M

DIE

Slug-snap version (for slug-problems)

67

ps:®MT10-TP CUTTING DIE

FOR MULTITOOL MACHINE GROUP I (DIMENSION 1,00 MM - 10,50 MM)

(TRUPUNCH1000, 2000, 2020, 3000, 5000 TRUMATIC1000, 3000, 6000, 7000)



DESCRIPTION	POSITION	PART-NO.
CUTTING DIE (H-PM®)		
Shapes on customer request	1	114941
CUTTING DIE HOLDER (1)		
Without cutting die, incl. 1 set of shims	2	114640



Details / Additional costs:

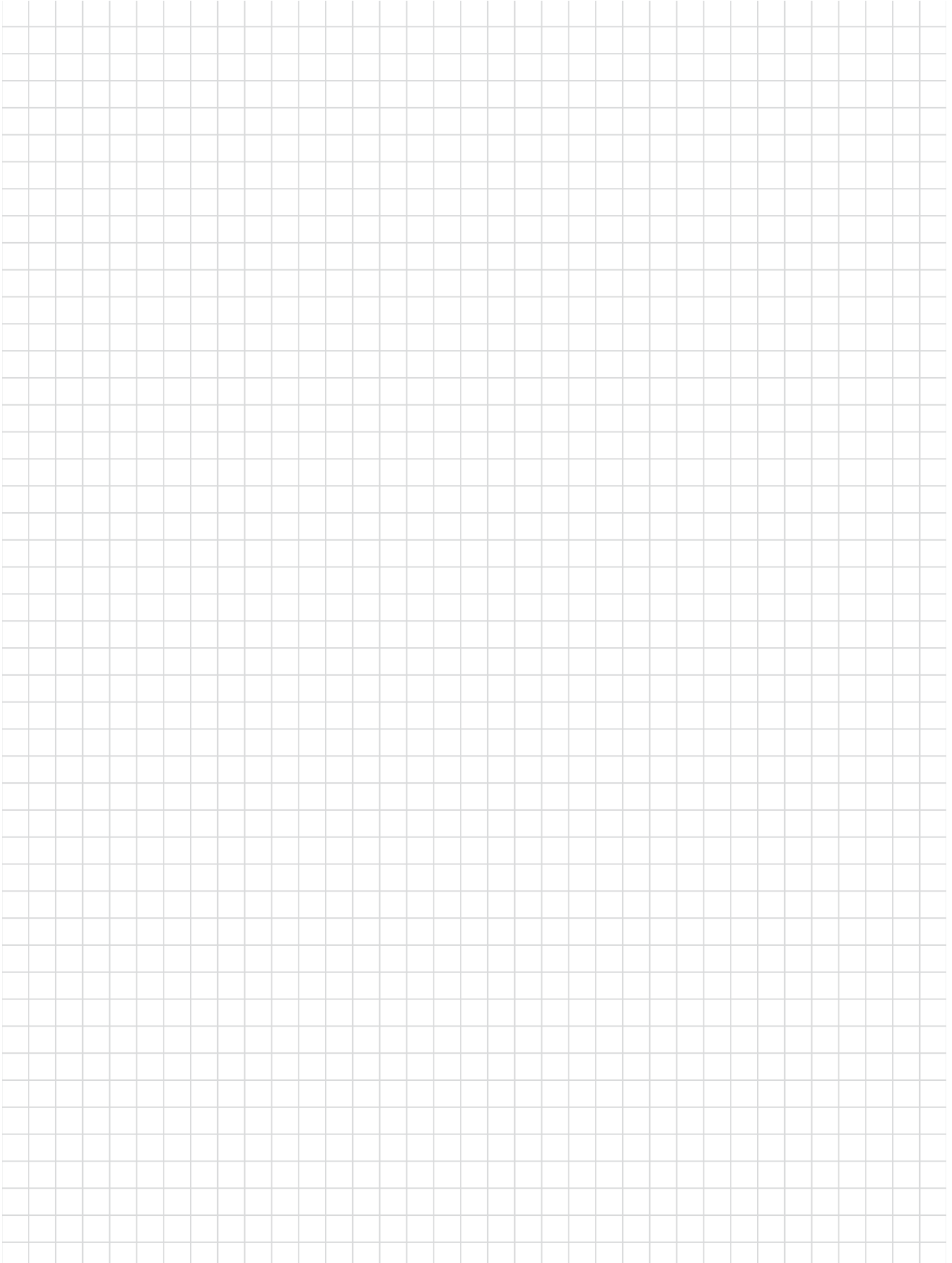
DIE HOLDER AND DIE INSERTS

Slug-stop version (negative cutting)

Slug-snap version (for slug-problems)

Set of shims:

(2xt = 0,1 mm / 2xt = 0,3 mm / 2xt = 0,5 mm) - part-no. 114U4MG





SLITTING TOOLS

PASS TOOLS FOR YOUR
TRUMPF SYSTEM

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Slitting Tool Size 2 / 5 x 76,2 - Standard	page 30
Slitting Tool Size 2 / 5 x 56 - spring loaded	page 31
Slitting Tool Size 2 / 5 x 56 - PU	page 32
Slitting Tool Size 2 / 5 x 76,2 - PU	page 33

ps:[®]T8-shear-TP SIZE 5 / 5 X 76,2

INTEGRATED ADJUSTING RING, DIE PLATE



DESCRIPTION	POSITION	PART-NO.
PUNCH		
With integrated adjusting ring	1	1S108100
STRIPPER		
Stripper	2	1S108110
DIE PLATE		
Single	3	1S108131
Pair	3*	1S108132
DIE PLATE HOLDER		
Without die plate	4	1S108120

* no picture

Details / Additional costs:

PUNCH

Max. sheet thickness $s = 3,00$ mm

Cross references:

PUNCH

Additional costs for coating

RTC cartridge and die carrier

see page

64

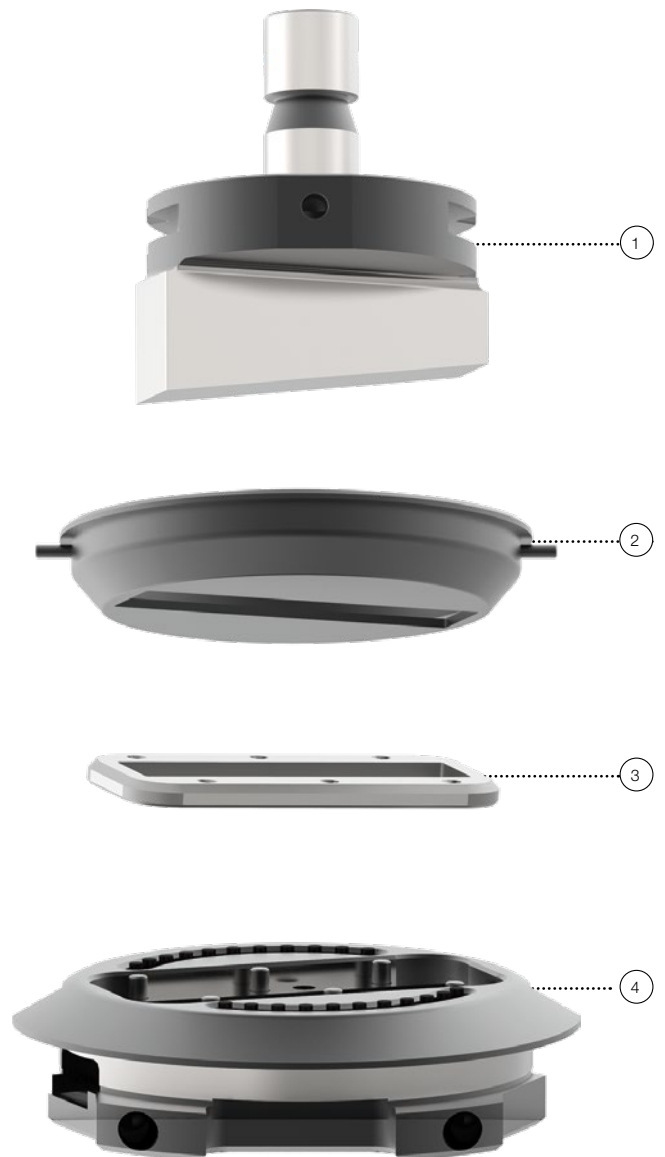
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ps:[®]T8 trim-TP SIZE 5 / 18 X 73

INTEGRATED ADJUSTING RING, DIE PLATE

DESCRIPTION	POSITION	PART-NO.
PUNCH		
With integrated adjusting ring	1	1S108200
STRIPPER		
Stripper	2	1S108210
DIE PLATE		
Single	3	1S108231
Pair	3*	1S108232
DIE PLATE HOLDER		
Without die plate	4	1S108220

* no picture



Details / Additional costs:

PUNCH
Max. sheet thickness $s = 3,00$ mm

Cross references:

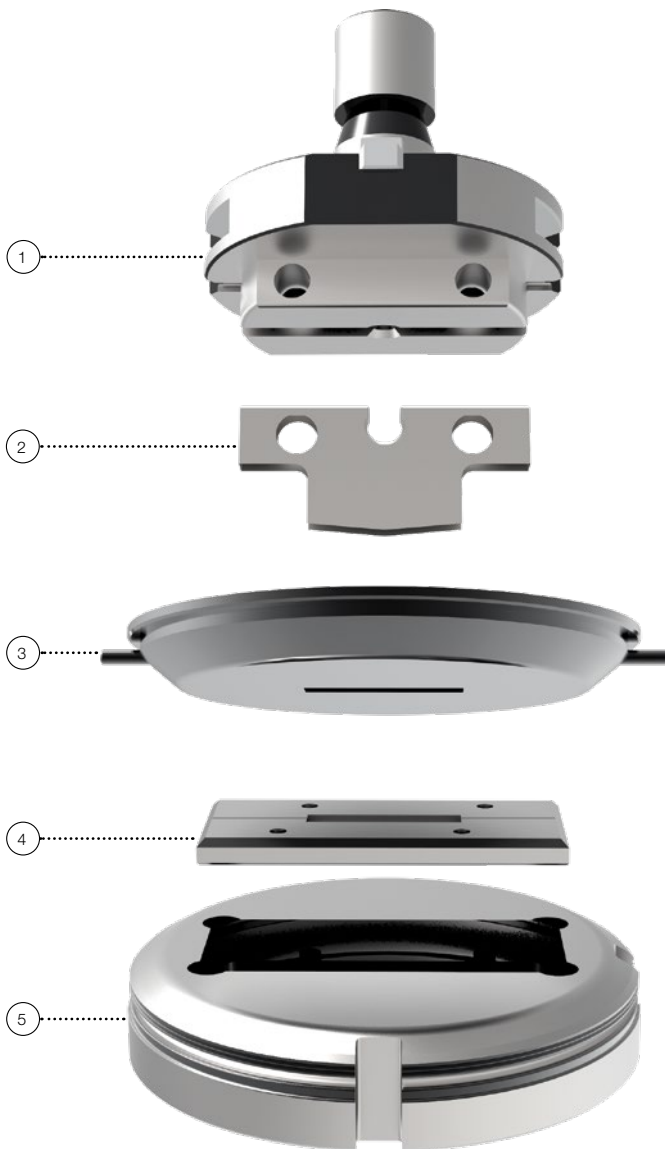
	see page
PUNCH	
Additional costs for coating	64
RTC cartridge and die carrier	50

DIE PLATE HOLDER

Shim 0,3 mm - 1S108253
Shim 0,5 mm - 1S108255

SLITTING TOOL SIZE 2 / 5 X 30 - STANDARD

INTEGRATED ADJUSTING RING, SLITTING PUNCH BLADE, DIE PLATE



DESCRIPTION	POSITION	PART-NO.
COMPLETE TOOL ⁽¹⁾		
Oblong	1 - 5	1S0433110
Rectangle	1 - 5	1S0433120
Rectangle with 4 x R = 0,5	1 - 5	1S0433130
Trapezoid SF17	1 - 5	1S0433140
Double Trapezoid SF16	1 - 5	1S0433150
SLITTING PUNCH BLADE HOLDER (WITHOUT PUNCH BLADE INSERT)		
With integrated adjusting ring	1	1S0393
SLITTING PUNCH BLADE INSERT (H-PM[®]) ⁽¹⁾		
Oblong	2	1S04331
Rectangle	2	1S04332
Rectangle with 4 x R = 0,5	2	1S04333
Trapezoid SF17	2	1S04334
Double Trapezoid SF16	2	1S04335
STRIPPER		
Oblong	3	119234
Rectangle	3	119233
Rectangle with 4 x R = 0,5	3	119233
Trapezoid SF17	3	119237
Double Trapezoid SF16	3	119236
DIE PLATE (H-PM[®])		
Oblong	4	1S17251
Rectangle ⁽²⁾	4	1S17252
Trapezoid SF17	4	1S17254
Double Trapezoid SF16	4	1S17255
DIE PLATE ADAPTER (WITHOUT DIE PLATE) ⁽³⁾		
Incl. screws	5	1S1730

Details / Additional costs:

UPPER PART

Max. sheet thickness up to 3,00 mm

⁽¹⁾ Additional costs for reduced dimensional deviation

⁽¹⁾ Standard version with rooftop

Set of spare screws M 8 x 16 (2 pc per set)

Part-no. 1S0393Z

Cross references:

see page

UPPER PART

Additional costs for coating (slitting punch blade insert)

64

Polished cutting part (punch size 2)

65

STRIPPER

PU coating for low-scratch material handling

STRIPPER

Spare parts

62

Push-out stripper

63

LOWER PART

Compensating rings:

1 Set (2xt = 0,1 mm / 2xt = 0,3 mm / 2xt = 0,5 mm) - part-no. 1S3794

⁽²⁾ Suitable for rectangle, as well as rectangle 4 x R = 0,5

⁽³⁾ Brush version for low-scratch material handling

LOWER PART

RTC cartridge and die carrier

50

Keyway clamps

62

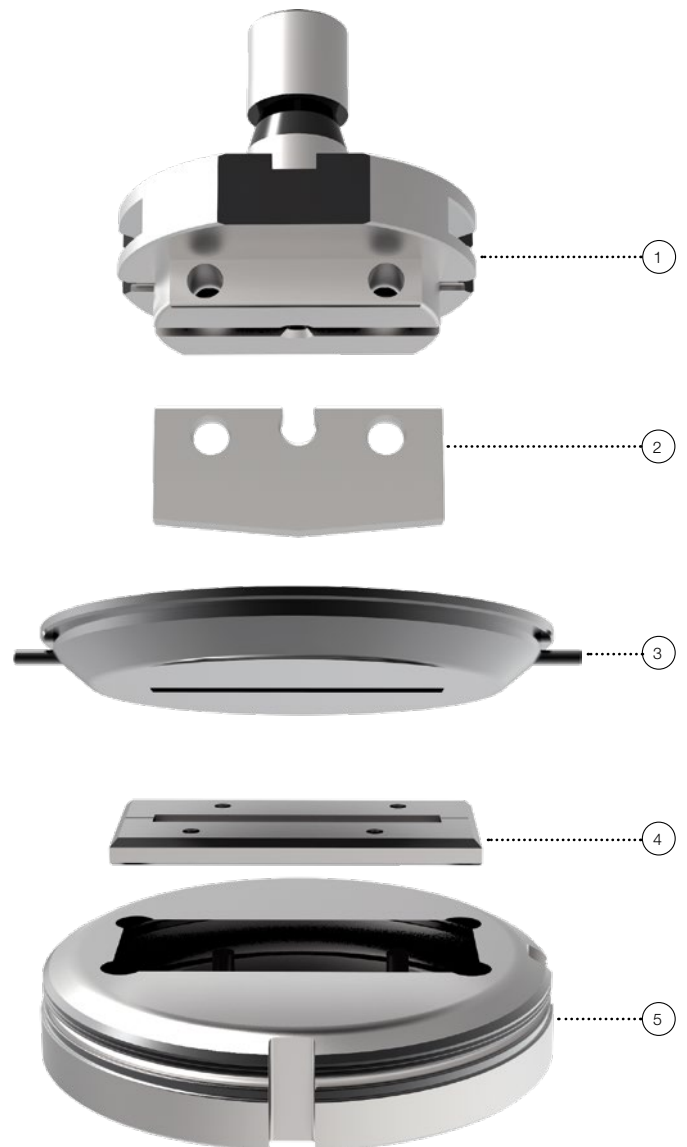
Slug-snap version for slug problems (die size 2)

67

SLITTING TOOL SIZE 2 / 5 X 56 - STANDARD

INTEGRATED ADJUSTING RING, SLITTING PUNCH BLADE, DIE PLATE

DESCRIPTION	POSITION	PART-NO.
COMPLETE TOOL ⁽¹⁾		
Oblong	1 - 5	1S0431110
Rectangle	1 - 5	1S0431120
Rectangle with 4 x R = 0,5	1 - 5	1S0431130
Trapezoid SF17	1 - 5	1S0431140
Double Trapezoid SF16	1 - 5	1S0431150
SLITTING PUNCH BLADE HOLDER (WITHOUT PUNCH BLADE INSERT)		
With integrated adjusting ring	1	1S0393
SLITTING PUNCH BLADE INSERT (H-PM[®]) ⁽¹⁾		
Oblong	2	1S04311
Rectangle	2	1S04312
Rectangle with 4 x R = 0,5	2	1S04313
Trapezoid SF17	2	1S04314
Double Trapezoid SF16	2	1S04315
STRIPPER		
Oblong	3	119254
Rectangle	3	119253
Rectangle with 4 x R = 0,5	3	119253
Trapezoid SF17	3	119257
Double Trapezoid SF16	3	119256
DIE PLATE (H-PM[®])		
Oblong	4	1S17261
Rectangle ⁽²⁾	4	1S17262
Trapezoid SF17	4	1S17264
Double Trapezoid SF16	4	1S17265
DIE PLATE ADAPTER (WITHOUT DIE PLATE) ⁽³⁾		
Incl. screws	5	1S1756



Details / Additional costs:

UPPER PART

Max. sheet thickness up to 3,00 mm

⁽¹⁾ Additional costs for reduced dimensional deviation

⁽¹⁾ Standard version with rooftop

Set of spare screws M 8 x 16 (2 pc per set)

Part-no. 1S0393Z

Cross references:

UPPER PART

Slitting close to embossing

Additional costs for coating (slitting punch blade insert)

Polished cutting part (punch size 2)

see page

31 - 32

64

65

STRIPPER

PU coating for low-scratch material handling

STRIPPER

Spare parts

Push-out stripper

62

63

LOWER PART

Compensating rings:

1 Set (2xt = 0,1 mm / 2xt = 0,3 mm / 2xt = 0,5 mm) - part-no. 1S3794

⁽²⁾ Suitable for rectangle, as well as rectangle 4 x R = 0,5

⁽³⁾ Brush version for low-scratch material handling

LOWER PART

RTC cartridge and die carrier

Keyway clamps

Slug-snap version for slug problems (die size 2)

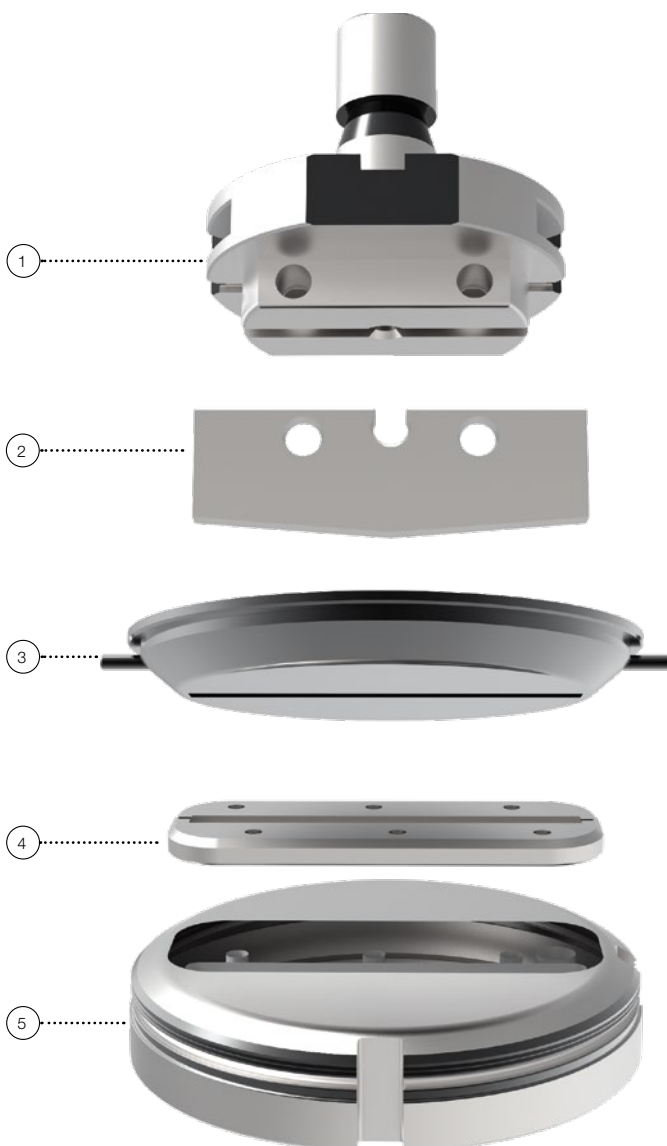
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62

67

SLITTING TOOL SIZE 2 / 5 X 76,2 - STANDARD

INTEGRATED ADJUSTING RING, SLITTING PUNCH BLADE, DIE PLATE



DESCRIPTION	POSITION	PART-NO.
COMPLETE TOOL ⁽¹⁾		
Oblong	1 - 5	1S0432110
Rectangle	1 - 5	1S0432120
Rectangle with 4 x R = 0,5	1 - 5	1S0432130
Trapezoid SF17	1 - 5	1S0432140
Double Trapezoid SF16	1 - 5	1S0432150
SLITTING PUNCH BLADE HOLDER (WITHOUT PUNCH BLADE INSERT)		
With integrated adjusting ring	1	1S0393
SLITTING PUNCH BLADE INSERT (H-PM[®]) ⁽¹⁾		
Oblong	2	1S04321
Rectangle	2	1S04322
Rectangle with 4 x R = 0,5	2	1S04323
Trapezoid SF17	2	1S04324
Double Trapezoid SF16	2	1S04325
STRIPPER		
Oblong	3	119274
Rectangle	3	119273
Rectangle with 4 x R = 0,5	3	119273
Trapezoid SF17	3	119277
Double Trapezoid SF16	3	119276
DIE PLATE (H-PM[®])		
Oblong	4	1S17411
Rectangle ⁽²⁾	4	1S17412
Trapezoid SF17	4	1S17414
Double Trapezoid SF16	4	1S17415
DIE PLATE ADAPTER (WITHOUT DIE PLATE) ⁽³⁾		
Incl. screws	5	1S1776

Details / Additional costs:

UPPER PART

Max. sheet thickness up to 2,50 mm

⁽¹⁾ Additional costs for reduced dimensional deviation

⁽¹⁾ Standard version with rooftop

Set of spare screws M 8 x 16 (2 pc per set)

Part-no. 1S0393Z

Cross references:

see page

UPPER PART

Slitting close to embossing

33

Additional costs for coating (slitting punch blade insert)

64

Polished cutting part (punch size 2)

65

STRIPPER

PU coating for low-scratch material handling

STRIPPER

Spare parts

62

Push-out stripper

63

LOWER PART

Compensating rings:

1 Set (2xt = 0,1 mm / 2xt = 0,3 mm / 2xt = 0,5 mm) - part-no. 1S3797

⁽²⁾ Suitable for rectangle, as well as rectangle 4 x R = 0,5

⁽³⁾ Brush version for low-scratch material handling

LOWER PART

RTC cartridge and die carrier

50

Keyway clamps

62

Slug-snap version for slug problems (die size 2)

67

SLITTING TOOL SIZE 2 / 5 X 56 - SPRING LOADED

INTEGRATED ADJUSTING RING, SLITTING PUNCH BLADE AND DIE DIE PLATE
FOR SLITTING CLOSE TO EMBOSSING UP TO H = 4,50 MM,
WITH SPRING-LOADED METAL STRIPPER

DESCRIPTION	POSITION	PART-NO.
COMPLETE TOOL ^(*)		
Oblong	1 - 7	1S037110
Rectangle	1 - 7	1S037120
Rectangle with 4 x R = 0,5	1 - 7	1S037130
Trapezoid SF17	1 - 7	1S037140
Double Trapezoid SF16	1 - 7	1S037150
COMPLETE UPPER PART ^(*)		
Oblong	1 - 5	1S03711
Rectangle	1 - 5	1S03712
Rectangle with 4 x R = 0,5	1 - 5	1S03713
Trapezoid SF17	1 - 5	1S03714
Double Trapezoid SF16	1 - 5	1S03715
SPARE PARTS FOR UPPER PART		
Slitting punch blade holder	1	1S0371
Set of spare springs and screws	3 + 4	1S0379
Active stripper	5	1S03752C
SLITTING PUNCH BLADE INSERT (H-PM[®]) ^(*)		
Oblong	2	1S04311
Rectangle	2	1S04312
Rectangle with 4 x R = 0,5	2	1S04313
Trapezoid SF17	2	1S04314
Double Trapezoid SF16	2	1S04315
DIE PLATE (H-PM[®])		
Oblong	6	1S17261
Rectangle ^(*)	6	1S17262
Trapezoid SF17	6	1S17264
Double Trapezoid SF16	6	1S17265
DIE PLATE ADAPTER (WITHOUT DIE PLATE) ^(*)		
Incl. screws	7	1S1756



Details / Additional costs:

UPPER PART

Max. sheet thickness up to 1,50 mm

^(*) Additional costs for reduced dimensional deviation

^(*) Standard version with rooftop

Set of spare screws M 8 x 16 (2 pc per set)

Part-no. 1S0393Z

Cross references:

UPPER PART

Additional costs for coating (slitting punch blade insert)

Polished cutting part (punch size 2)

see page

64

65

STRIPPER

Polished version for low-scratch material handling

STRIPPER

LOWER PART

Compensating rings:

1 Set (2xt = 0,1 mm / 2xt = 0,3 mm / 2xt = 0,5 mm) - part-no. 1S3794

^(*) Suitable for rectangle, as well as rectangle 4 x R = 0,5

^(*) Brush version for low-scratch material handling

LOWER PART

RTC cartridge and die carrier

Keyway clamps

Slug-snap version for slug problems (die size 2)

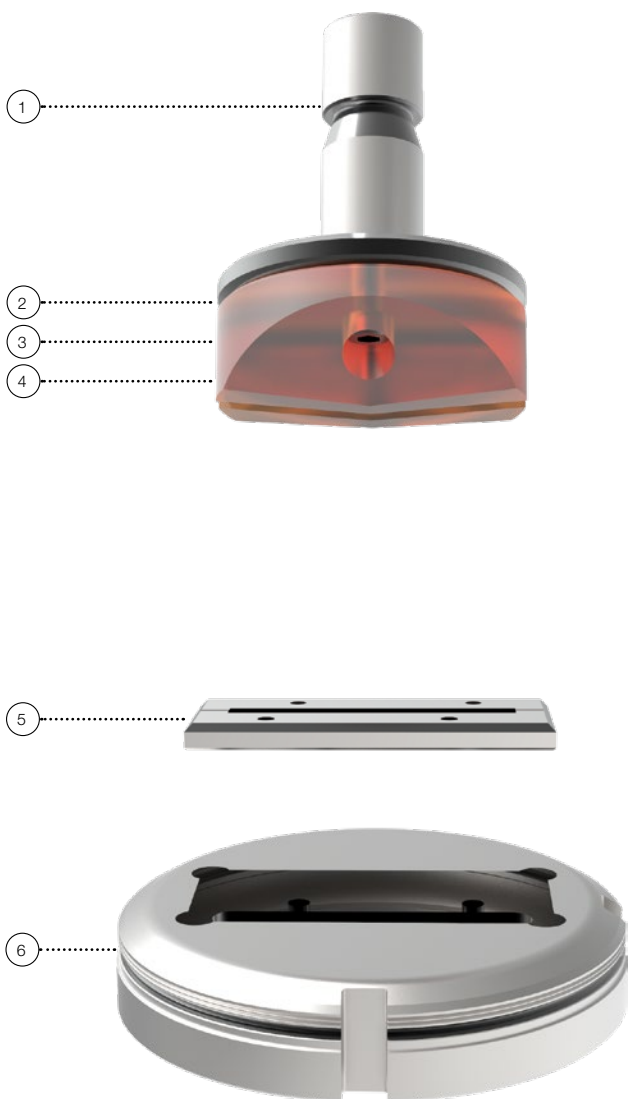
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62

67

SLITTING TOOL SIZE 2 / 5 X 56 - PU

FOR SLITTING CLOSE TO EMBOSSING, WITH PU STRIPPER



DESCRIPTION	POSITION	PART-NO.
COMPLETE TOOL ⁽¹⁾		
Oblong	1 - 6	1S295010
Rectangle	1 - 6	1S295020
Rectangle with 4 x R = 0,5	1 - 6	1S295030
Trapezoid SF17	1 - 6	1S295040
Double Trapezoid SF16	1 - 6	1S295050
COMPLETE UPPER PART (INCL. SPRINGS, SCREWS, SOCKETS) ⁽¹⁾		
Oblong	1 - 4	1S29501
Rectangle	1 - 4	1S29502
Rectangle with 4 x R = 0,5	1 - 4	1S29503
Trapezoid SF17	1 - 4	1S29504
Double Trapezoid SF16	1 - 4	1S29505
PUNCH (WITHOUT SPRINGS, SCREWS, SOCKETS) (H-PM) ⁽¹⁾		
Oblong	1	1S29511
Rectangle	1	1S29512
Rectangle with 4 x R = 0,5	1	1S29513
Trapezoid SF17	1	1S29514
Double Trapezoid SF16	1	1S29515
DIE PLATE (H-PM) ⁽²⁾		
Oblong	5	1S17261
Rectangle ⁽²⁾	5	1S17262
Trapezoid SF17	5	1S17264
Double Trapezoid SF16	5	1S17265
DIE PLATE ADAPTER (WITHOUT DIE PLATE) ⁽³⁾		
Incl. screws	6	1S1756

Details / Additional costs:

UPPER PART

Max. sheet thickness up to 3,00 mm

⁽¹⁾ Additional costs for reduced dimensional deviation

⁽¹⁾ Standard version with rooftop

X3-PM quality -> see page 70

Cross references:

see page

UPPER PART

Adjusting rings	44
ps:®passfit - explanation and additional costs	49
Additional costs for coating (punch size 2)	64
Polished cutting part (punch size 2)	65

STRIPPER

Set of spare PU springs - part-no. 1S2956 - pos. 4

Set of spare sockets - part-no. 1S2954 - pos. 3

Set of spare screws - part-no. 1S2950 - pos. 2

LOWER PART

Compensating rings:

1 Set (2xt = 0,1 mm / 2xt = 0,3 mm / 2xt = 0,5 mm) - part-no. 1S3794

⁽²⁾ Suitable for rectangle, as well as rectangle 4 x R = 0,5

⁽³⁾ Brush version for low-scratch material handling

STRIPPER

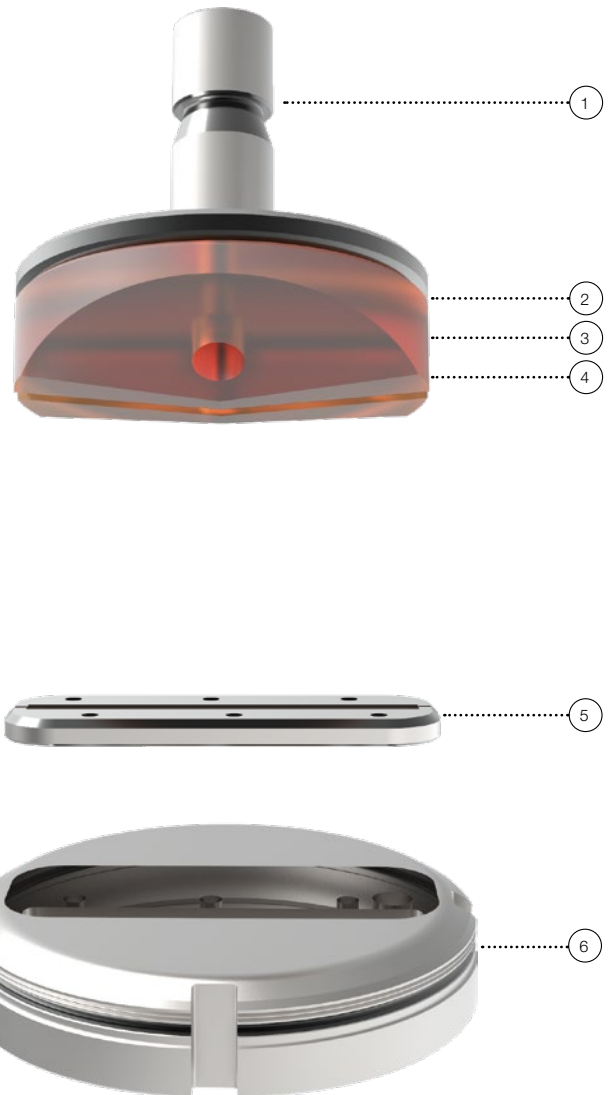
LOWER PART

RTC cartridge and die carrier	50
Keyway clamps	62
Slug-snap version for slug problems (die size 2)	67

SLITTING TOOL SIZE 2 / 5 X 76,2 - PU

FOR SLITTING CLOSE TO EMBOSSING, WITH PU STRIPPER

DESCRIPTION	POSITION	PART-NO.
COMPLETE TOOL ^(*)		
Oblong	1 - 6	1S297010
Rectangle	1 - 6	1S297020
Rectangle with 4 x R = 0,5	1 - 6	1S297030
Trapezoid SF17	1 - 6	1S297040
Double Trapezoid SF16	1 - 6	1S297050
COMPLETE UPPER PART (INCL. SPRINGS, SCREWS, SOCKETS) ^(*)		
Oblong	1 - 4	1S29701
Rectangle	1 - 4	1S29702
Rectangle with 4 x R = 0,5	1 - 4	1S29703
Trapezoid SF17	1 - 4	1S29704
Double Trapezoid SF16	1 - 4	1S29705
PUNCH (WITHOUT SPRINGS, SCREWS, SOCKETS) (H-PM®) ^(*)		
Oblong	1	1S29711
Rectangle	1	1S29712
Rectangle with 4 x R = 0,5	1	1S29713
Trapezoid SF17	1	1S29714
Double Trapezoid SF16	1	1S29715
DIE PLATE (H-PM®)		
Oblong	5	1S17411
Rectangle ^(*)	5	1S17412
Trapezoid SF17	5	1S17414
Double Trapezoid SF16	5	1S17415
DIE PLATE ADAPTER (WITHOUT DIE PLATE) ^(*)		
Incl. screws	6	1S1776



Details / Additional costs:

UPPER PART

Max. sheet thickness up to 2,50 mm

^(*) Additional costs for reduced dimensional deviation

^(*) Standard version with rooftop

X3-PM quality -> see page 70

Cross references:

UPPER PART

Adjusting rings

ps:®passfit - explanation and additional costs

Additional costs for coating (punch size 2)

Polished cutting part (punch size 2)

see page

44

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STRIPPER

Set of spare PU springs - part-no. 1S2955 - pos. 4

Set of spare sockets - part-no. 1S2954 - pos. 3

Set of spare screws - part-no. 1S2950 - pos. 2

STRIPPER

LOWER PART

Compensating rings:

1 Set (2xt = 0,1 mm / 2xt = 0,3 mm / 2xt = 0,5 mm) - part-no. 1S3797

^(*) Suitable for rectangle, as well as rectangle 4 x R = 0,5

^(*) Brush version for low-scratch material handling

LOWER PART

RTC cartridge and die carrier

Keyway clamps

Slug-snap version for slug problems (die size 2)

50

62

67



SPECIAL TOOLS

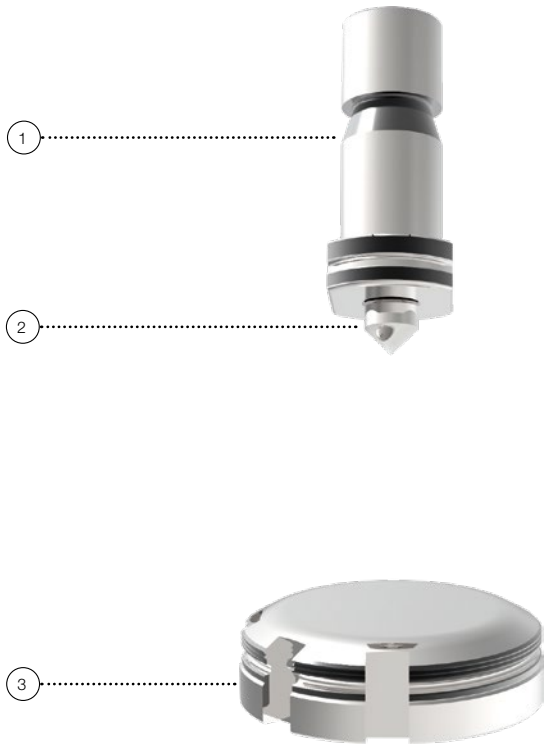
PASS EXTRA TOOLS FOR YOUR
TRUMPF SYSTEM

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Centre Punch Tool from Above	page 36
Centre Punch Tool from Below	page 37
ps:®signing	page 38
ps:®engraving	page 39
ps:®MT10-TP for embossing	page 40
ps:®single-thread-TP	page 41

CENTRE PUNCH TOOL FROM ABOVE

FOR MACHINE GROUP H



DESCRIPTION	SHEET THICKNESS	POSITION	PART-NO.
CENTRE PUNCH TOOL „SOLID“ - PUNCH CHUCK, CENTRE PUNCH, DIE ⁽¹⁾			
Complete tool	1,00 - 4,50*	1 - 3	1S092A
Complete tool	4,51 - 8,00	1 - 3	1S092B
SPARE CENTRE PUNCH			
Length 55,3 mm	1,00 - 4,50*	2	1S0921
Length 51,3 mm	4,51 - 8,00	2	1S0922
SPARE DIE			
Flat	1,00 - 8,00	3	1S3940

* for machine group I up to 8,00 mm

Details / Additional costs:

ACCESSORIES

⁽¹⁾ Suitable adjusting ring - part-no. 118101 -> see page 44

⁽¹⁾ Screw with shoulder M14 x 1,5 x 12 - part-no. 1S0925

CENTRE PUNCH TOOL FROM BELOW

FOR MACHINE GROUP H

DESCRIPTION	SHEET THICKNESS	POSITION	PART-NO.
CENTRE PUNCH TOOL WITH STEPLESS ADJUSTABLE CENTRE MARK TEMPLATE DEPTH ^(*)			
Complete tool	1,00 - 4,00*	1 - 7	1S2800
SPARE PARTS FOR CENTRE PUNCH TOOL WITH STEPLESS ADJUSTABLE DEPTH			
Upper Part	1,00 - 4,00	1	1S2801
Stripper	1,00 - 4,00	2	1S2804
Centre punch	1,00 - 4,00	3	1S2805
Cushioning element	1,00 - 4,00	4	1S2806
Adjusting screw	1,00 - 4,00	7	1S2809

* for machine group I up to 8,00 mm



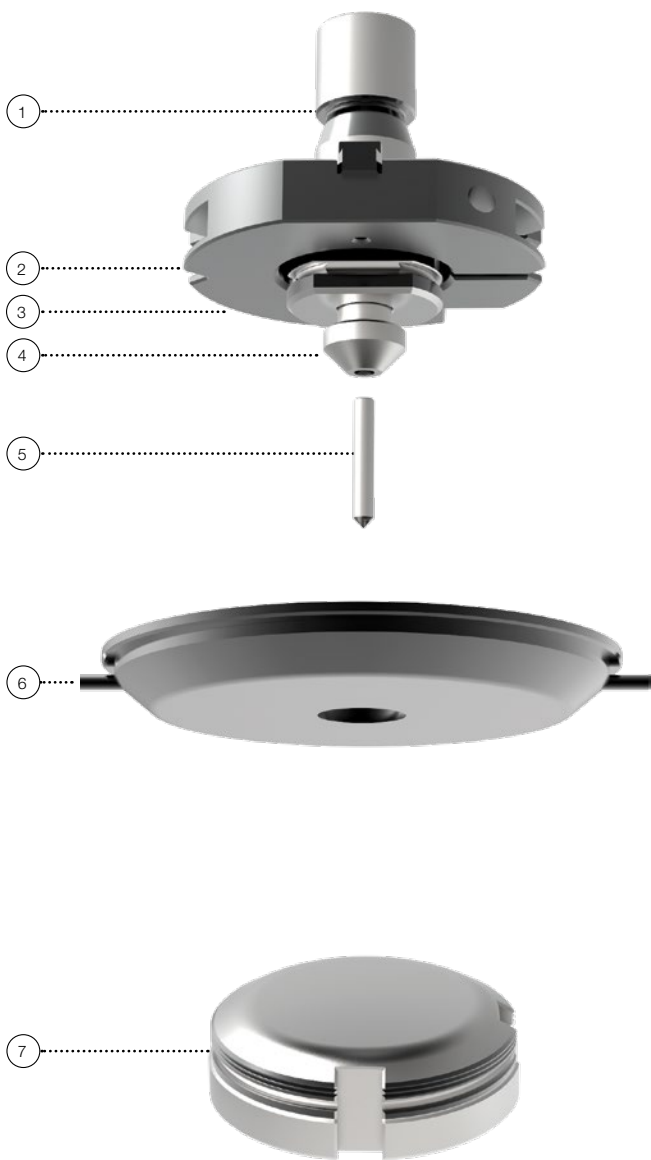
Details:

ACCESSORIES

^(*) Suitable adjusting ring - part-no. 118201 -> see page 44

ps:® signing

FOR SHEET THICKNESSES FROM 0,80 MM UP TO 8,00 MM



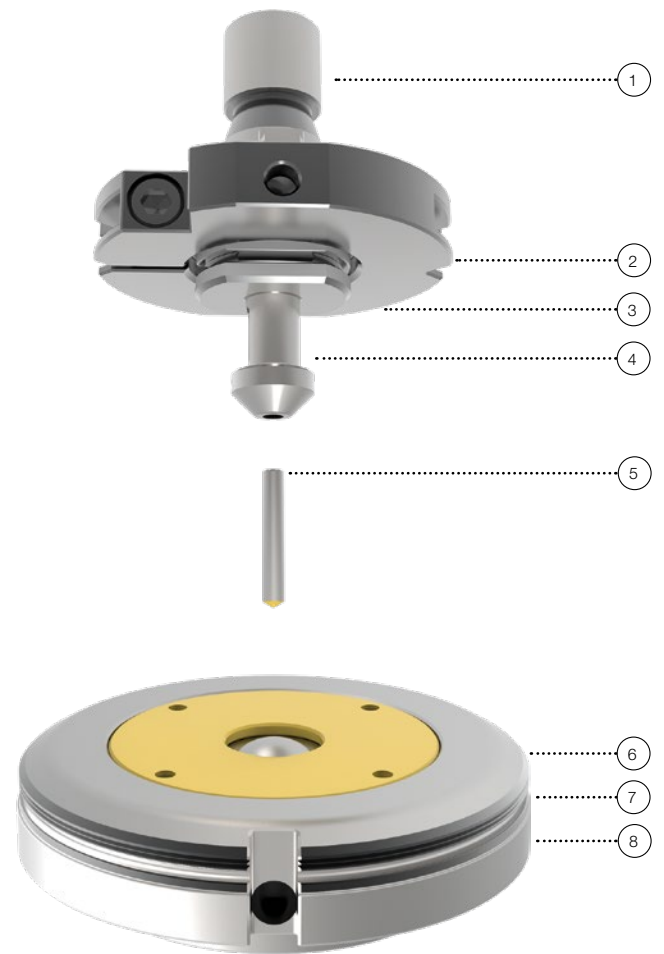
DESCRIPTION	POSITION	PART-NO.
COMPLETE SIGNING TOOL		
Consisting of:	1 - 7	1S390W
complete upper part, incl. adjusting ring, stripper Ø 20 and flat die		
COMPLETE SIGNING UPPER PART		
Consisting of:	1 - 5	1S3900
adapter, adjusting ring, signing pin and spring		
SPARE SIGNING PIN		
Made of H-PM® steel	5	1S3930
SPARE STRIPPER		
Ø 20	6	112211-20
SPARE DIE		
Flat	7	1S3940

Details: see page

ACCESSORIES	
Spare adjusting ring - part-no. 118101	44

Option „signing“ must be unlocked in the machine controlling

DESCRIPTION	POSITION	PART-NO.
ENGRAVING TOOL INCL. DIE AND BALL CASTER		
Consisting of:	1 - 8	199103950
complete upper part, incl. 3 types of springs, adjusting ring, die and ball caster		
ENGRAVING TOOL UPPER PART		
Incl. 3 types of springs	1 - 5	199103950-1
SPARE ENGRAVING NEEDLE		
Diamond	5	199103962
SPARE DIE		
Incl. Ampco plate and ball caster	6 - 8	199103950-2
SPARE SPRINGS		
„Green“ for aluminium		91701025A
„Blue“ for steel		91701025B
„Red“ for stainless steel		91701025C



Details: see page

ACCESSORIES

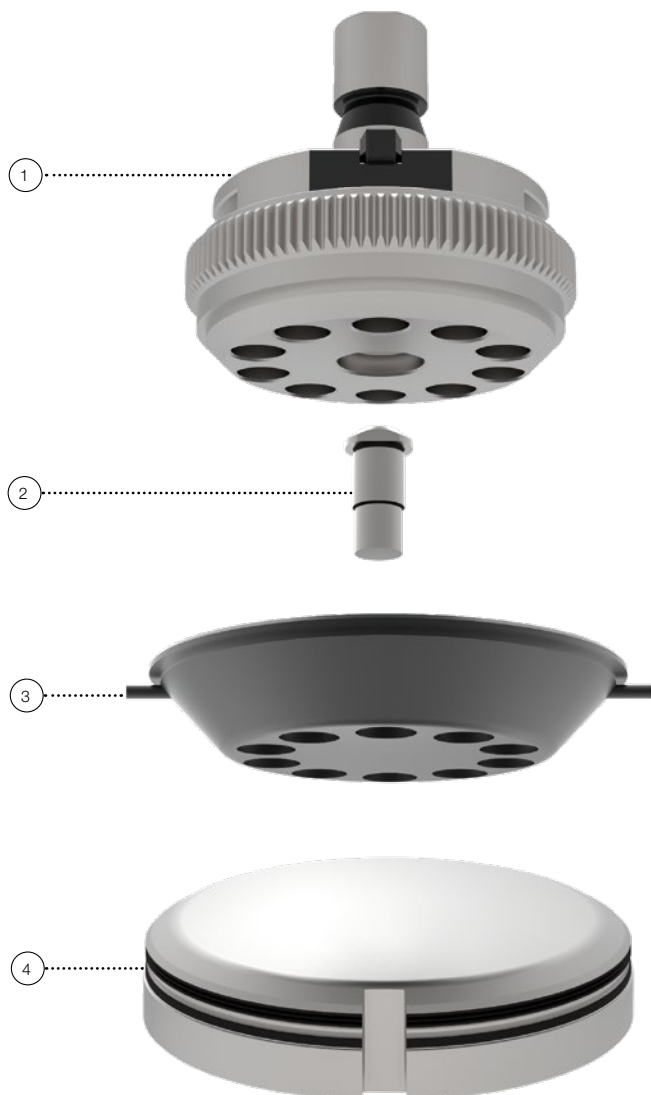
Spare adjusting ring - part-no. 118101 44

Option „engraving“ must be unlocked in the machine controlling

ps:®MT10-TP FOR EMBOSSING

FOR MACHINE GROUP I

(TRUPUNCH1000, 2000, 2020, 3000, 5000 TRUMATIC1000, 3000, 6000, 7000)



DESCRIPTION	POSITION	PART-NO.
PUNCH HOLDER		
Punch holder	1	113S40
PUNCH INSERT		
Letter, digit or special sign on customer request	2	113P10_?
STRIPPER		
Round 12	3	113PA10
With PU surface round 12	3*	115PU40
EMBOSSING DIE		
Embossing die	4	113PM10

* no picture

Cross references / Additional costs:

ACCESSORIES

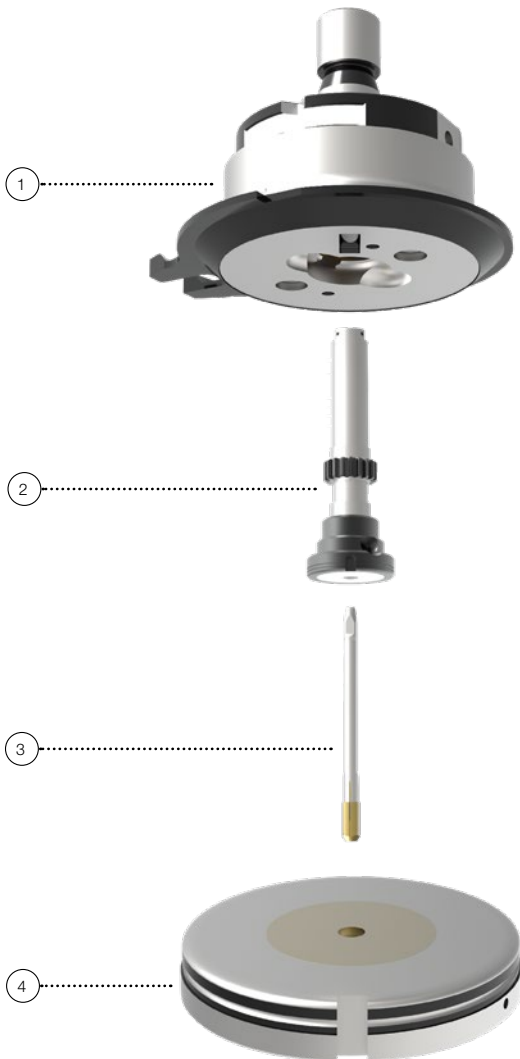
RTC cartridge and die carrier - see page 41

Stripper in polished version for low-scratch material handling

ps:® single-thread-TP

FOR MACHINE GROUP I

(TRUPUNCH1000, 2000, 2020, 3000, 5000 TRUMATIC1000, 3000, 6000, 7000)



DESCRIPTION	SIZE	POSITION	PART-NO.
TOOL TYPE 1			
Upper part ⁽¹⁾	M2 - M5	1	924GF1101
Tapping module ⁽²⁾	M2,5	2	924GF1301
Tapping module ⁽²⁾	M3	2	924GF1302
Tapping module ⁽²⁾	M4	2	924GF1304
Tapping module ⁽²⁾	M5	2	924GF1305
Tap insert 6HX - TIN	M2,5	3	924GF1401
Tap insert 6HX - TIN	M3	3	924GF1402
Tap insert 6HX - TIN	M4	3	924GF1404
Tap insert 6HX - TIN	M5	3	924GF1405
Lower part type A ⁽³⁾	M2 - M10	4	924GF2201
Lower part type B ⁽⁴⁾	M3 - M8	4	924GF2211
TOOL TYPE 2			
Upper part ⁽¹⁾	M6 - M10	1	924GF2101
Tapping module ⁽²⁾	M6	2	924GF2301
Tapping module ⁽²⁾	M8	2	924GF2302
Tapping module ⁽²⁾	M10	2	924GF2303
Tap insert 6HX - TIN	M6	3	924GF2401
Tap insert 6HX - TIN	M8	3	924GF2402
Tap insert 6HX - TIN	M10	3	924GF2403
Lower part type A ⁽³⁾	M2 - M10	4	924GF2201
Lower part type B ⁽⁴⁾	M3 - M8	4	924GF2211

Details:

Cross references:

see page

INFORMATION

ACCESSORIES

One complete tool always includes:
„upper part; tapping module; tap insert and lower part“

RTC cartridge and die carrier

50

⁽¹⁾ Without tapping module and tap insert

⁽²⁾ Without tap insert

⁽³⁾ Suitable for flat sheets and extrusions (form-up)

⁽⁴⁾ Suitable for flat sheets and extrusions (form-up and down)

Suitable for max. sheet thickness $s = 1,00$ mm to $8,00$ mm

Other thread sizes and versions (e.g. thread measured in inches) on request

Please note that tapping tools are exclusively used in machines with programming option „Thread Forming“



IT DEPENDS ON: ACCESSORIES

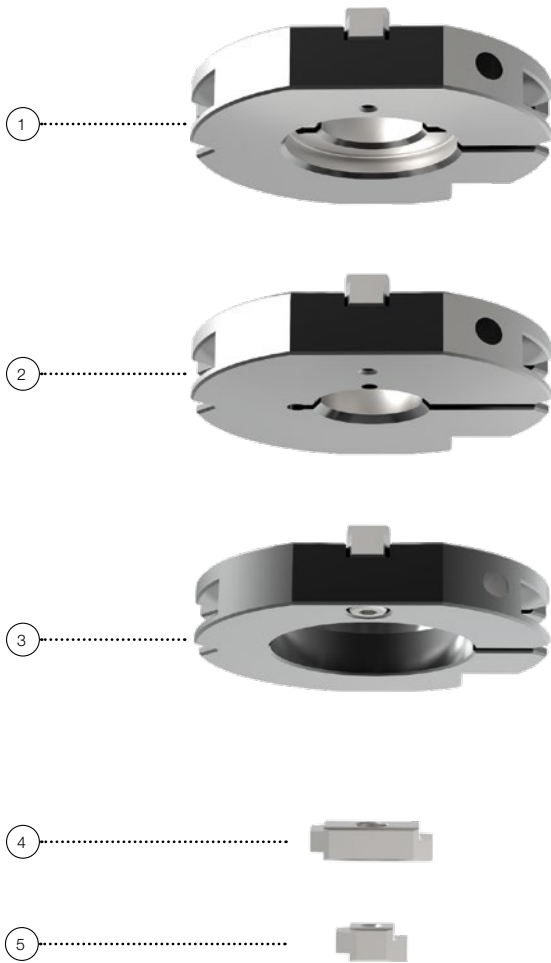
PASS ACCESSORIES FOR YOUR
TRUMPF SYSTEM

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Punch Chucks, Adapter Rings	page 45
Adjustment Unit for Punch	page 46
Shims for Dies	page 47
Soft pads	page 48
ps:®passfit	page 49
RTC cartridge	page 50

ADJUSTING RINGS

(FOR MACHINE GROUPS E / F / H / I)



SIZE	POSITION	PART-NO.
AUTOMATIC ADJUSTING RINGS INCL. KEY		
Size 1 with cut-out	1	118101
Size 2 without cut-out	2	118201
ADJUSTING RING INCL. KEY FOR REINFORCED VERSION PUNCHES FORM		
Reinforced	3	118V01

Spare parts:

SPARE PARTS FOR ADJUSTING RINGS

Key for automatic adjusting rings - part-no. 118902 - pos. 4

Key for reinforced adjusting rings - part-no. 118903 - pos. 5

Cross references:

ACCESSORIES

Punch size 1 and 2

ps:®passfit - explanation and additional costs

Spare parts

see page

6 - 13

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PUNCH CHUCKS, ADAPTER RINGS

(FOR MACHINE GROUPS E / F / H / I)

SIZE	POSITION	PART-NO.
PUNCH CHUCK		
0 (up to 6,00 mm)	1	119A01
0 (up to 10,50 mm)	1	119B01
ADAPTER RING FOR DIE		
2 / 1	2	120210
ADAPTER RING WITH BRUSHES		
2 / 1	3	1S1820



Spare parts:

SPARE PARTS FOR ADAPTER RING WITH BRUSHES

- Spare brush for adapter ring - part-no. 1S1822 - pos. 4
- Set of compensating rings / shims (6xt = 0,5 mm) - part-no. 1S1823 - pos. 5

Cross references:

ACCESSORIES

- Punch size 0 6 - 13
- Die size 1 6 - 15
- Spare parts 62

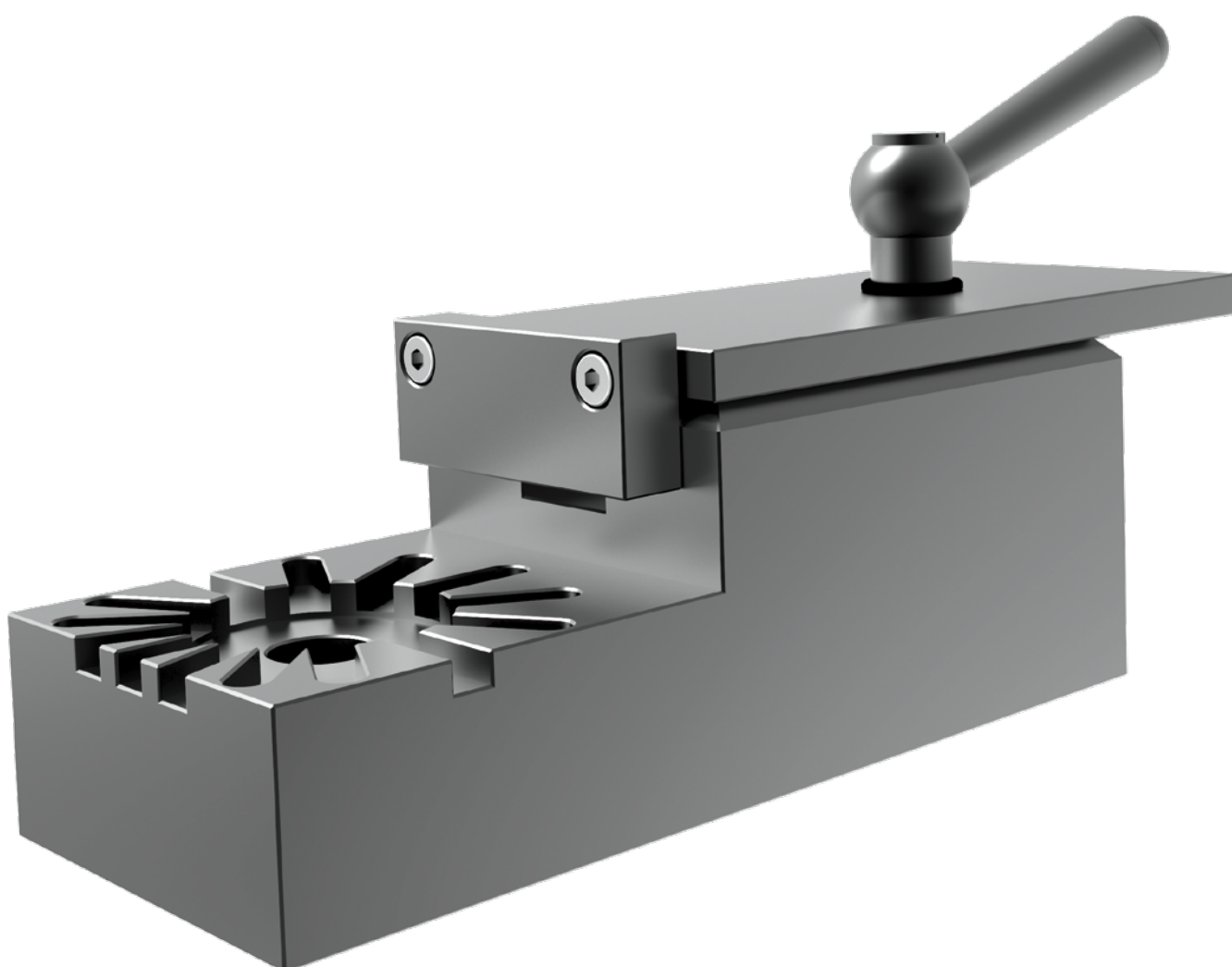
see page

ADJUSTMENT UNIT FOR PUNCH

PART-NO.

POSSIBLE ANGLES: 0° - 22,5° - 30° - 45° - 60° - 67,5° - 90°

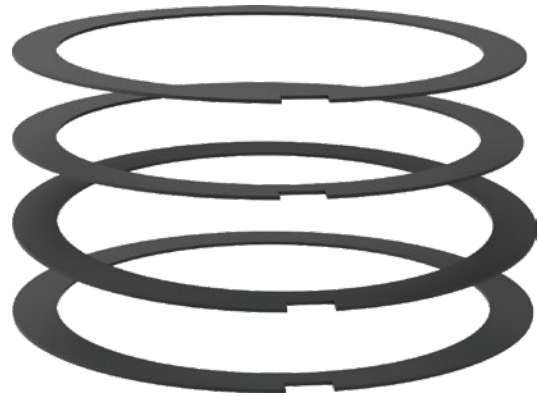
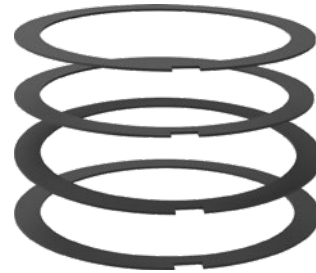
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SHIMS FOR DIES

SIZE	RANGE	PART-NO.
SET OF SHIMS FOR DIE SIZE 1		
1	4 x t = 0,1 mm	11AS01
1	4 x t = 0,3 mm	11AS03
1	4 x t = 0,5 mm	11AS05
1	2x t = 0,1 / 1x t = 0,3 / 1x t = 0,5 mm	11AS0_

SET OF SHIMS FOR DIE SIZE 2		
2	4 x t = 0,1 mm	12AS01
2	4 x t = 0,3 mm	12AS03
2	4 x t = 0,5 mm	12AS05
2	2x t = 0,1 / 1x t = 0,3 / 1x t = 0,5 mm	12AS0_

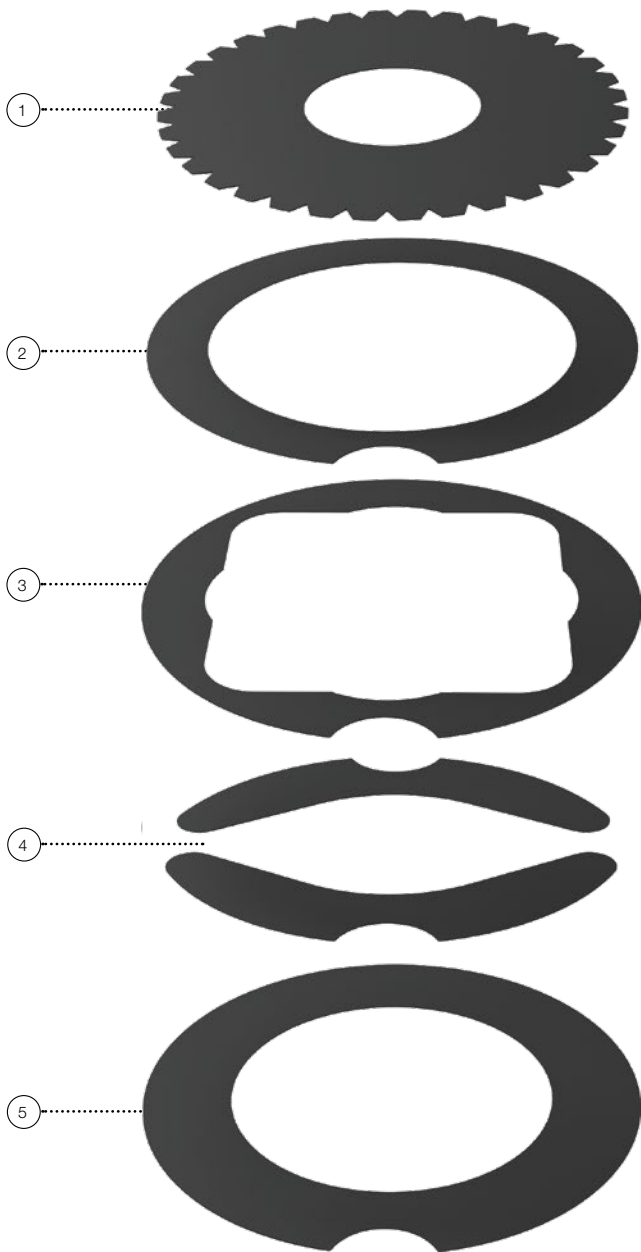


Details: see page

ACCESSORIES

Adapter rings for die	45
RTC cartridge and die carrier	50

SOFT PADS



SIZE	RANGE	POSITION	PART-NO.
SOFT PADS FOR STRIPPER			
2	Inside-Ø 16	1	PAD2A16
2	Inside-Ø 25	1	PAD2A25
2	Inside-Ø 50	1	PAD2A50
2	Inside-Ø 76	1	PAD2A76

SOFT PADS FOR DIE			
2	General	2	PAD2MAN
2	Square	3	PAD2MQN
2	Rectangle / oblong	4	PAD2MFN

SOFT PADS FOR ADAPTER RING			
2 to 1		5	PAD2ZAN

FOR FAST AND EASY ADJUSTMENT WITHOUT THE NEED FOR A FIXTURE

DESCRIPTION	MACHINE GROUP	PART-NO.
ps:®passfit ADJUSTING RING INCL. KEY FOR PUNCH SIZE 1		
Size 1	E-I	1181P1

ps:®passfit ADJUSTING RING INCL. KEY FOR PUNCH SIZE 2		
Size 2	E-I	1182P1

s:®passfit ADJUSTING RING INCL. KEY FOR PUNCH REINFORCED VERSION		
Reinforced	E-I	118VP1

DESCRIPTION	LOCATION	PART-NO.
ps:®passfit FOR PUNCH SIZE 1		
First keyway	0°	__P1
Each additional keyway		

ps:®passfit FOR PUNCH SIZE 2 AND SIZE 3		
First alignment hole & pin	0 - 90°	__P2
Each additional alignment hole		

ps:®passfit PUNCH REINFORCED FORM		
First keyway	0°	__P1
Each additional keyway		



Details:

INFORMATION ABOUT ps:®passfit

- Form-fitting anti-rotation-lock
- High operational security of the machine
- Solid tool, as the approved standard punches serve as basic tool
- Profile debilitation develops at the tension shaft
- High precision mating with punch; does not add to tool length
- Keyway positions on customer request
- Also reasonable for special tools
- All PASS cluster tools are generally equipped with ps:®passfit

Additional costs:

SPARE PARTS

- Adjusting key for ps:®passfit - adjusting ring size 1 and size 2 - part-no. 118902
- Adjusting key for ps:®passfit - adjusting ring reinforced form - part-no. 118903

RTC CARTRIDGE

FOR MACHINE GROUP H & I (TC 200, TC500, TC600, TRUPUNCH1000, 2000, 2020, 3000, 5000 TRUMATIC1000, 3000, 6000, 7000)

DESCRIPTION	POSITION	PART-NO.
RTC CARTRIDGE AND DIE CARRIER	1 - 2	on request
RTC CARTRIDGE	1	960100010
DIE CARRIER FOR RTC CARTRIDGE	2	960100020



A large grid of graph paper for taking notes, consisting of 20 columns and 40 rows of small squares.



YOU NEED IT BIG SIZE?

PASS TOOLS SIZE 3 AND SPECIFIC TOOLING FOR BOSCHERT PUNCHING MACHINES

INDEX

Punching Tools (Standard) Size 3	page 54
Punching Tools (Form) Size 3	page 55
Adapter and Manual Adjusting Rings	page 56
Slitting Tool Size 2	page 57
Slitting Tool Size 3	page 58
PU stripper	page 59

PUNCHING TOOLS (STANDARD) SIZE 3



DESCRIPTION	DIM. D	PART-NO.
ROUND		
Punch (H-PM®)	76,21 - 105,00 mm	101311C
Die	77,01 - 107,00 mm	106311C
Manual stripper	78,01 - 107,00 mm	111311C
SQUARE		
Punch (H-PM®)	53,91 - 74,25 mm	101312C
Die	54,91 - 75,50 mm	106312C
Manual stripper	56,01 - 77,00 mm	111312C
RECTANGLE		
Punch (H-PM®)	76,21 - 105,00 mm	101313C
Die	77,01 - 107,00 mm	106313C
Manual stripper	78,01 - 107,00 mm	111313C
OBLONG		
Punch (H-PM®)	76,21 - 105,00 mm	101314C
Die	77,01 - 107,00 mm	106314C
Manual stripper	78,01 - 107,00 mm	111314C

Additional costs:

PUNCH

Punches with shear (WT / DOWT / etc.) -> see page 66

Cutting part under 1,00 mm

4 x corner radius

X3-PM quality -> see page 70

Cross references:

PUNCH

ps:®passfit - explanation and additional costs

Additional costs for coating

Polished cutting part

Adjusting rings

see page

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STRIPPER

Polished version for low-scratch material handling

STRIPPER

Spare parts

PU stripper

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DIE

Slug-stop version (negative cutting)

Additional keyway

Brush version for low-scratch material handling

X8-PM quality -> see page 70

DIE

Slug-snap version (for slug problems) - price on request

Adapter rings

67

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PUNCHING TOOLS (FORM) SIZE 3

DESCRIPTION	DIM. D	PART-NO.
SPECIAL SHAPE TOOLS GROUP 1 (SF01, SF02, SF04, SF05)		
Punch (H-PM®)	76,21 - 105,00 mm	12131_C1
Die	77,01 - 107,00 mm	12631_C1
Manual stripper	78,01 - 107,00 mm	1273D_C1
SPECIAL SHAPE TOOLS GROUP 2 (SF03, SF07, SF13, SF17)		
Punch (H-PM®)	76,21 - 105,00 mm	12131_C2
Die	77,01 - 107,00 mm	12631_C2
Manual stripper	78,01 - 107,00 mm	1273D_C2
SPECIAL SHAPE TOOLS GROUP 3 (SF06, SF08, SF14, SF16)		
Punch (H-PM®)	76,21 - 105,00 mm	12131_C3
Die	77,01 - 107,00 mm	12631_C3
Manual stripper	78,01 - 107,00 mm	1273D_C3
SPECIAL SHAPE TOOLS GROUP 4 (SF09, SF10, SF11, SF12, SF15)		
Punch (H-PM®)	76,21 - 105,00 mm	12131_C4
Die	77,01 - 107,00 mm	12631_C4
Manual stripper	78,01 - 107,00 mm	1273D_C4



Additional costs:

PUNCH

Punches with shear (WT / DOWT / etc.) -> see page 66

Cutting part under 1,00 mm

X3-PM quality -> see page 70

Cross references:

PUNCH

Types of special shapes

ps:®passfit - explanation and additional costs

Additional costs for coating

Polished cutting part

Adjusting rings

see page

10 - 13

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44 + 56

STRIPPER

Polished version for low-scratch material handling

STRIPPER

Spare parts

PU stripper

62

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DIE

Slug-stop version (negative cutting)

Additional keyway

Brush version for low-scratch material handling

X8-PM quality -> see page 70

DIE

Slug-snap version (for slug problems) - price on request

Adapter rings

67

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ADAPTER AND MANUAL ADJUSTING RINGS

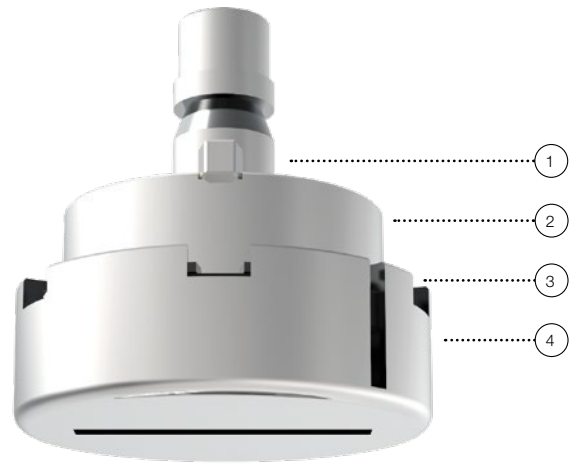


DESCRIPTION	MACHINE GROUP	POSITION	PART-NO.
ADAPTER RING FOR STRIPPER			
From 3 to 2	C - D	1	120326
ADAPTER RING FOR DIE			
From 3 to 1	C - D	2	120310
From 3 to 2	C - D	2*	120320
ADJUSTING RINGS (MANUAL)			
1	A - D	3*	118102
2	A - D	3*	118202
3 (outside Ø 95 mm)	A - D	3	118302
ps:®passfit ADJUSTING RINGS (MANUAL)			
1	A - D	4*	1181P2
2	A - D	4*	1182P2
3 (outside Ø 95 mm)	A - D	4	1183P2

* no picture

SLITTING TOOL SIZE 2 FOR BOSCHERT PUNCHING MACHINES

DESCRIPTION	POSITION	PART.NC.
SPRING LOADED SLITTING TOOL SIZE 2 - MEASURE 5 X 30 - 4 X R=0,5 ⁽¹⁾		
Upper part - complete	1 - 4	1S0330530
Spare slitting punch blade insert ⁽²⁾ (H-PM [®])	2	1S0440
Spare stripper 6 x 57	4	1S0333
Die cl 0,1 - cl 0,3	5	106T530__
Die cl 0,4 - cl 1,0	5	109T530__
SPRING LOADED SLITTING TOOL SIZE 2 - MEASURE 5 X 40 - 4 X R=0,5 ⁽¹⁾		
Upper part - complete	1 - 4	1S0330540
Spare slitting punch blade insert ⁽²⁾ (H-PM [®])	2	1S0441
Spare stripper 6 x 57	4	1S0333
Die cl 0,1 - cl 0,3	5	106T540__
Die cl 0,4 - cl 1,0	5	109T540__
SPRING LOADED SLITTING TOOL SIZE 2 - MEASURE 5 X 56 - 4 X R=0,5 ⁽¹⁾		
Upper part - complete	1 - 4	1S0330556
Spare slitting punch blade insert ⁽²⁾ (H-PM [®])	2	1S0442
Spare stripper 6 x 57	4	1S0333
Die cl 0,1 - cl 0,3	5	106T556__
Die cl 0,4 - cl 1,0	5	109T556__
OTHER SPARE PARTS		
Spare springs		
Set of steel springs (2 x big / 2 x small)	3	1S0331



Details / Additional costs:

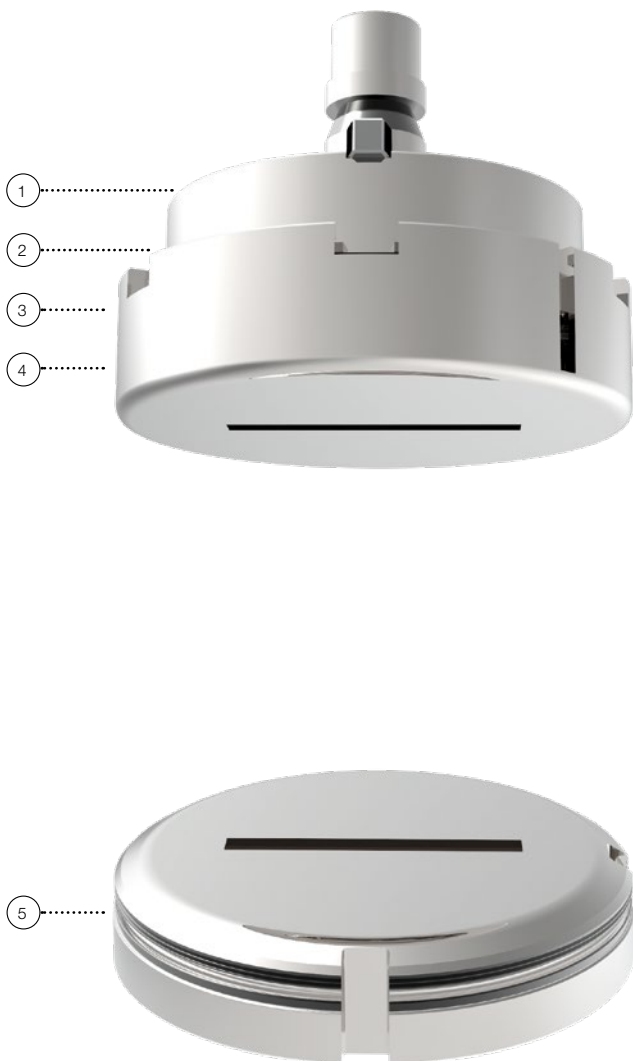
⁽¹⁾ For slitting: Aluminium s = 4,00 mm,
steel s = 4,00 mm, stainless steel s = 2,5 mm

⁽²⁾ Slitting punch blade insert general with PASS T-MAX coating

⁽²⁾ Additional costs for reduced dimensional deviation

SLITTING TOOL SIZE 3

FOR BOSCHERT PUNCHING MACHINES



DESCRIPTION	POSITION	PART-NO.
SPRING LOADED SLITTING TOOL SIZE 3 - MEASURE 8 X 30 - 4 X R = 1,00 ⁽¹⁾		
Upper part - complete	1 - 4	1S0350830
Spare slitting punch blade insert ⁽²⁾ (H-PM [®])	2	1S0446
Spare stripper	4	1S0355830
Die cl 0,3 - cl 1,0	5	109T830__
Die cl 1,2 - cl 1,5	5	109T830__
SPRING LOADED SLITTING TOOL SIZE 3 - MEASURE 8 X 40 - 4 X R = 1,00 ⁽¹⁾		
Upper part - complete	1 - 4	1S0350840
Spare slitting punch blade insert ⁽²⁾ (H-PM [®])	2	1S0447
Spare stripper	4	1S0355840
Die cl 0,3	5	106T840__
Die cl 0,4 - cl 1,2	5	109T840__
SPRING LOADED SLITTING TOOL SIZE 3 - MEASURE 8 X 56 - 4 X R = 1,00 ⁽¹⁾		
Upper part - complete	1 - 4	1S0350856
Spare slitting punch blade insert ⁽²⁾ (H-PM [®])	2	1S0448
Spare stripper	4	1S0355856
Die cl 0,3	5	106T856__
Die cl 0,4 - cl 1,0	5	109T856__
OTHER SPARE PARTS		
Spare springs		
Set of steel springs (4 x big / 4 x small)	3	1S03558X1

Details / Additional costs:

⁽¹⁾ For slitting: Aluminium s = 6,00 mm,
steel s = 6,00 mm, stainless steel s = 3,00 mm

⁽²⁾ Slitting punch blade insert general with PASS T-MAX coating

⁽²⁾ Additional costs for reduced dimensional deviation

PU STRIPPER

SPRING TYPE	PUNCH SHAPE ^(*)	RANGE	PART-NO.
WITHOUT SHAPE			
1	Flat size 1	- 12,00 mm	1S013810
1	Whisper size 1	- 12,00 mm	1S013820
2	Flat size 1	- 30,50 mm	1S013830
2	Whisper size 1	- 30,50 mm	1S013840
3	Flat size 2	- 48,00 mm	1S013850
3	Whisper size 2	- 48,00 mm	1S013860
	Flat / Whisper size 2	> 48,00 mm	on request

FOR ROUND PUNCHES			
1	Flat size 1	- 12,00 mm	1S013811
1	Whisper size 1	- 12,00 mm	1S013821
2	Flat size 1	- 30,50 mm	1S013831
2	Whisper size 1	- 30,50 mm	1S013841
3	Flat size 2	- 48,00 mm	1S013851
3	Whisper size 2	- 48,00 mm	1S013861
	Flat / Whisper size 2	> 48,00 mm	on request

FOR FORM PUNCHES			
1	Flat size 1	- 12,00 mm	1S013812
1	Whisper size 1	- 12,00 mm	1S013822
2	Flat size 1	- 30,50 mm	1S013832
2	Whisper size 1	- 30,50 mm	1S013842
3	Flat size 2	- 48,00 mm	1S013852
3	Whisper size 2	- 48,00 mm	1S013862
	Flat / Whisper size 2	> 48,00 mm	on request

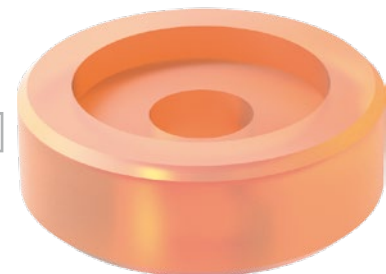
SPRING TYPE 1



SPRING TYPE 2



SPRING TYPE 3

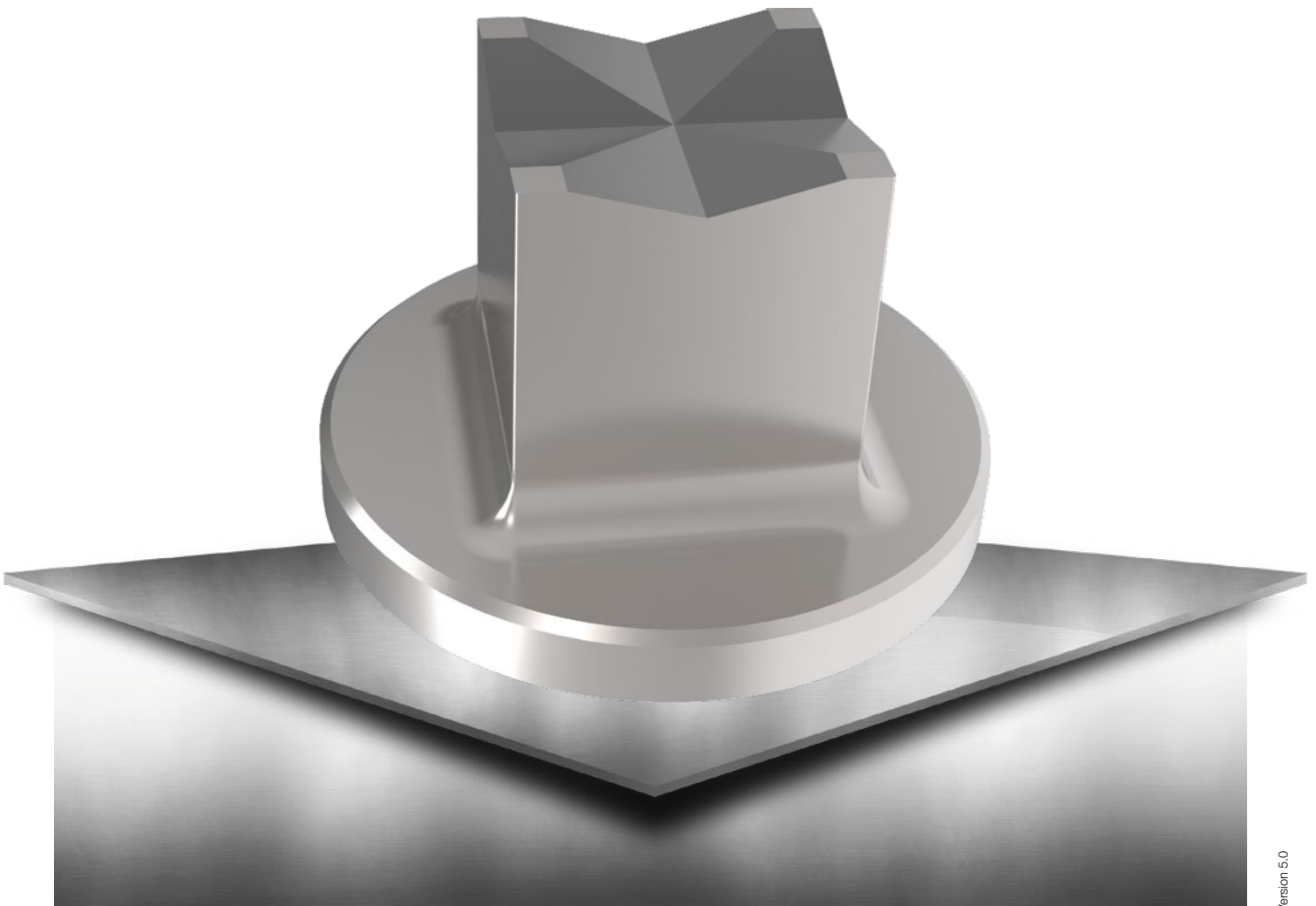


Details:

PUNCH SECTION

^(*) Flat = length 74,00 mm

^(*) Whisper = length 77,00 mm



WORKING EFFECTIVELY: EXTRA EQUIPMENT

PASS EXTRA EQUIPMENT FOR YOUR
TRUMPF SYSTEM

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Push-out stripper	page 63
Punch coatings	page 64
Draw-polishing	page 65
Punches with different shear types	page 66
slug-snap for dies	page 67

SPARE PARTS

DESCRIPTION	PART-NO.
SCREWS	
M5 x 10 for punch chuck Ø 6,00 mm	905006
M6 x 6 for punch chuck Ø 10,50 mm	905019
M8 x 16 for adapter rings size 2/1	905009
M8 x 12 with pins for adapter rings 3/1 - 3/2	905008
M14 x 1,5 x 12 for punch chuck	119991
CYLINDER PIN	
Ø 8 x 16 for adapter ring size 2/1	1-901013
Ø 8 x 16 for adapter ring size 3/1 - 3/2	2-901013
ps:®passfit	
Cylinder pin Ø 3 x 10 for adjusting ring size 1	901003
Adjusting key for punch size 2 + 3	118900006
SLITTING PUNCH BLADE INSERT AND DIE PLATE	
Center pin Ø 6 x 20 for slitting punch blade holder	901018
Set of spare screws for die die plate holder M4 x 12 - 6 pieces	1-907005
Set of spare screws for die die plate holder M4 x 12 - 4 pieces	2-907005
MISCELLANEOUS	
Die clip for die	106991
Stripper pin	110991
Clamping screw M6 x 25 for adjusting ring size 1 + 2	907013
Fixing crew M3 x 8 for adjusting key	907062
Handle for stripper adapter ring „manual“ size 3/2	120326-2

PUSH-OUT STRIPPER

FOR MACHINE GROUPS H / I

DESCRIPTION	POSITION	PART-NO.
PUSH-OUT STRIPPER		
Round	1 - 4	1S21201
Square	1 - 4	1S21202
Rectangle	1 - 4	1S21203
Oblong	1 - 4	1S21204
Special shape	1 - 4	1S21200
SPARE PARTS		
Spare screws (4 per set)	2	1S21291
Spare springs (4 per set)	3	1S21292



Additional costs:

Cross references:

see page

STRIPPER

Polished version for low-scratch material handling

Standard tools

6 - 13

Slitting tools

28 - 30

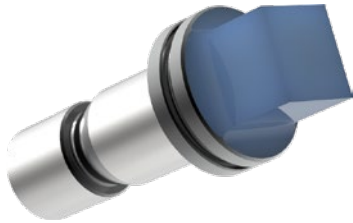
Spare parts

62

PUNCH COATINGS

ADVANTAGE: INCREASES TOOL LIFETIME, REDUCES MATERIAL BUILD UP

TICN



T-MAX



A-MAX



SIZE	RANGE
TICN COATING (FOR WORKING WITH STAINLESS STEEL) ^(*)	
0	- 10,50 mm
1	- 30,50 mm
2	- 76,20 mm
3	- 105,00 mm
Multitool	- 16,00 mm
Slitting punch blade insert	- 60,00 mm
Slitting punch blade insert	- 80,00 mm

SIZE	RANGE
T-MAX COATING (FOR WORKING WITH GALVANISED SHEET / ZINCOR) ^(*)	
0	- 10,50 mm
1	- 30,50 mm
2	- 76,20 mm
3	- 105,00 mm
Multitool	- 16,00 mm
Slitting punch blade insert	- 60,00 mm
Slitting punch blade insert	- 80,00 mm

SIZE	RANGE
A-MAX COATING (FOR DRY PROCESSING WITH ALUMINIUM SHEET) ^(*)	
0	- 10,50 mm
1	- 30,50 mm
2	- 76,20 mm
3	- 105,00 mm
Multitool	- 16,00 mm
Slitting punch blade insert	- 60,00 mm
Slitting punch blade insert	- 80,00 mm

Details:

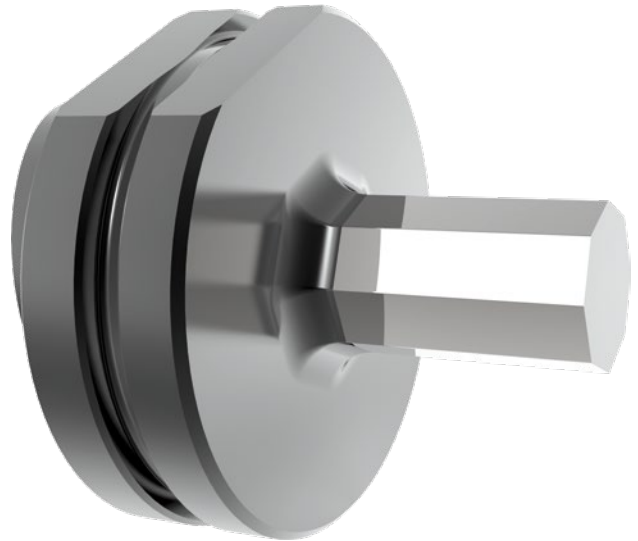
^(*) Suitable for cutting part sizes from Ø 4,00 mm or wide bases of 2,50 mm

DRAW-POLISHING

PUNCH EDGES

INCREASES TOOL LIFETIME, REDUCES MATERIAL BUILD UP

SIZE	RANGE
ROUND	
0	- 10,50 mm
1	- 30,50 mm
2	- 76,20 mm
3	- 105,00 mm
Multitool	- 16,00 mm
SQUARE / RECTANGLE / OBLONG	
0	- 10,50 mm
1	- 30,50 mm
2	- 76,20 mm
3	- 105,00 mm
Multitool	- 16,00 mm
O.D. GROUND SPECIAL SHAPES (SPECIAL SHAPE GROUP 1 & 2)	
0	- 10,50 mm
1	- 30,50 mm
2	- 76,20 mm
3	- 105,00 mm
Multitool	- 16,00 mm
EDM REQUIRED SPECIAL SHAPES (SPECIAL SHAPE GROUP 3 & 4)	
0	- 10,50 mm
1	- 30,50 mm
2	- 76,20 mm
3	- 105,00 mm
Multitool	- 16,00 mm



PUNCHES WITH DIFFERENT SHEAR TYPES

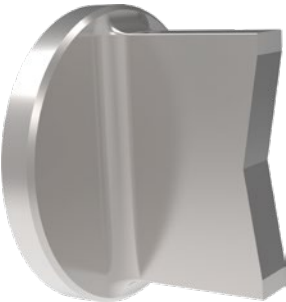
WT



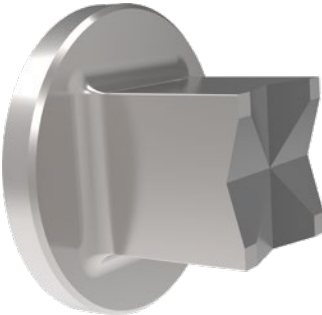
DOWT



2 PT



4 PT



DESCRIPTION

SHEAR TYPES
WT
DOWT
2 PT
4 PT

SLUG-SNAP FOR DIES

SIZE	RANGE
FOR DIES ROUND	
1	- 32,00 mm
2	- 77,00 mm
1 reinforced form	- 32,00 mm
2 reinforced form	- 62,00 mm
Multitool	- 16,00 mm
FOR DIE FORM	
1	- 32,00 mm
2	- 77,00 mm
1 reinforced form	- 32,00 mm
2 reinforced form	- 62,00 mm
Multitool	- 16,00 mm



SLUG-SNAP

Details:

SLUG-SNAP

Special holding bolts are included in the die, clamping the slug positively (better than the slug-stop version, negative cutting part)

The slug-snap version is also more convenient for shapes smaller than 4 mm and clearance smaller/equal 0,1 mm.



TECHNICAL INFORMATION

INFORMATION ABOUT OUR TOOLS FOR YOUR TRUMPF SYSTEM

INDEX

PASS tool variety	page 70
Lifetime of tools Re grind advice	page 71
PASS coating versions / Draw-polishing	page 72
Die versions	page 73
Punches with different shear types	page 74
PASS Back taper on punches	page 75
PASS corner radius on punches	page 76
PASS punches with reinforced shoulder	page 77

PASS TOOL VARIETY

HWS

HWS tools are made of a secondary hardened cold work steel with superior toughness. This type of steel is especially suitable for dies.

Advantages for customer:

- excellent cost in accordance to performance

H-PM®

H-PM® tools are produced with steel made on powder-metallurgical base with a high degree of purity.

This guarantees a segregational uniformed microstructure in the complete cross-section of the tool.

Advantage for customer:

- excellent cost in accordance to performance
- good stability for edges by increased toughness
- high tool lifetime due to the uniformed microstructure
- increased current hit-flex-capability; suitable as an excellent base for dies

X3-PM

The X3-PM tools are made of a high-end powder-metallurgical steel with the best possible performance characteristics for punches in the punching technology due to the best possible degree of purity.

The segregational uniformed microstructure with high vanadium concentration in the complete cross-section of the punch guarantees best possible wear resistance regarding tool lifetime.

Advantage for customer:

- best efficiency by multiple increase of the punch hit count
- best possible stability for cutting edges
- extremely high abrasion resistance
- utmost compressive strength

X8-PM

The X8-PM tools are made of a high-end powder-metallurgical steel the best possible performance characteristics for dies in the punching technology caused by best possible degree of purity.

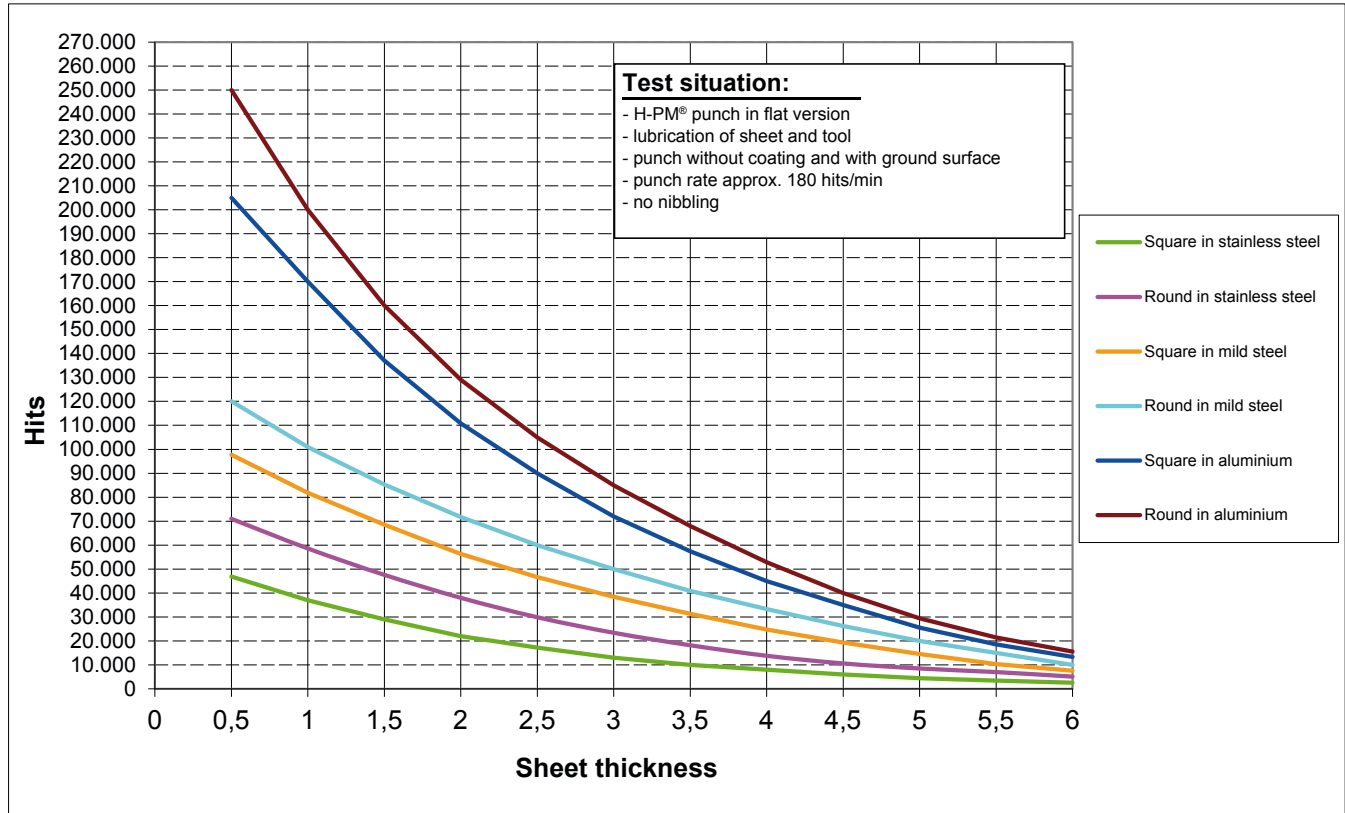
The high ductility of the segregational uniformed microstructure guarantees best possible fatigue limit. This kind of steel is especially suitable for dies with risk-breakage in regard to special shapes.

Advantage for customer:

- best possible absorption of hit-flex stress; prevents fatigue breakage
- high abrasion resistance

LIFETIME OF TOOLS | REGRIND ADVICE

PASS punches and dies are made of high-end special steel in order to guarantee best lifetime of tools together with high robustness.



INFLUENCING FACTORS	FACTOR
Galvanised steel / stainless steel with foil / aluminium anodised	0,5 - 0,8
No sheet lubrication	0,4 - 0,6
Punch coating (TICN for stainless steel / T-MAX for galvanised steel / A-MAX for aluminium)	2,0 - 4,0
PASS X3-PM punch	6,0 - 10,0
Nibbling	0,7 - 0,9
Notching	0,5 - 0,7
Shear	0,8 - 0,9
Punching rate > 300 hits / min.	0,8 - 0,9
Cutting part with EDM surface	0,4 - 0,8
Cutting part with polished surface	1,5 - 3,0
Cutting part smaller than 1,5x sheet thickness	0,6 - 0,8
Cutting part smaller than 1,0x sheet thickness	0,3 - 0,5
Using of a too small clearance	0,4 - 0,9

An average decrease of the tool life of 5 - 10% per regrind has to be taken in account for the first regrind.

PASS COATING VERSIONS / DRAW-POLISHING

TO REDUCE MATERIAL BUILD-UP

H-PM® tools are produced with steel made on powder-metallurgical base with a high degree of purity to fulfill the highest punching demands.

Furthermore we attach great importance to a high quality hardening process by repeated tempering and deep-freeze subsequently.

This process guarantees an extremely high hardness with an outstanding wear resistance of our punching tools.

Associated with modern production methods (grinding of the cutting edges with special grinding wheels) we can ensure that the wide range of different sheet qualities can be punched up to 1.600 N/mm² – no matter if it concerns mild alloyed aluminium, mild steel, stainless steel or spring band steel.

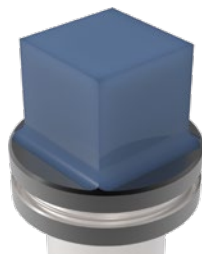
A high punch hardness as well as an excellent grinding surface are important in order to counteract the problem with edge build-up.

Tests show us that the well-known TiCN coating is a good coating to increase the lifetime (especially working with stainless steel). However, the problem of material buildup on the edges have not really been counteracted.

Built-up edges are known especially when working with

- galvanised steel
- aluminium

After specialized tests at PASS Stanztechnik AG the below mentioned coatings turned out to be the most successful coatings:



TiCN

for working with stainless steel



A-MAX

for dry processing with aluminium sheet



T-MAX

for working with galvanised sheet / zincor

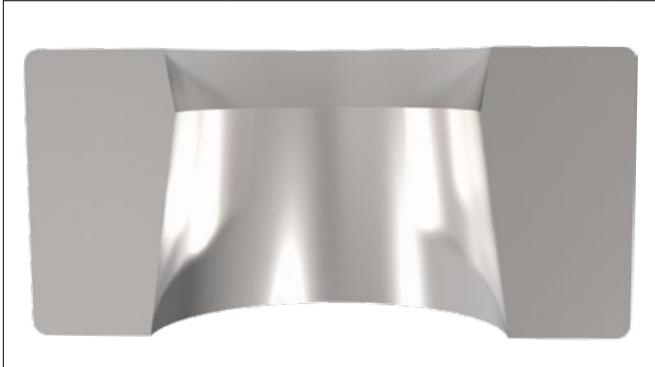
We recommend draw-polished punch edges to increase tool lifetime and reduce material build up (prices on request):



DIE VERSIONS

SLUG-STOP AND SLUG-SNAP (AVOID THE BUILD-UP OF THE SLUGS)

SLUG-STOP (WITHOUT ADDITIONAL COSTS)



PASS dies for tooling system TRUMPF are produced in standard version with clearance angle.

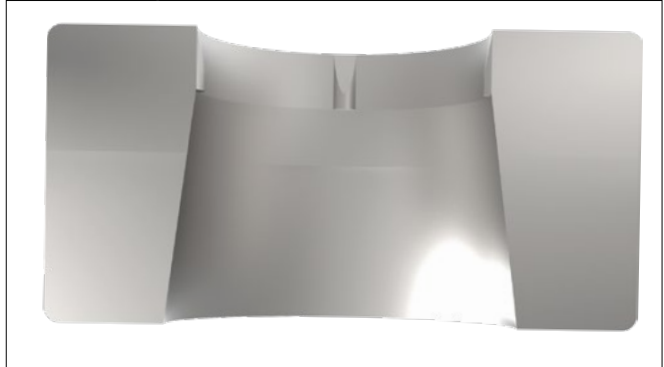
Dies can be produced in slug-stop version (without additional costs) in case of problems with pulling slugs. This means that the upper part of the cutting part is produced with a negative angle.

The slug will be held with the complete circumference in the die.

This is not recommended for:

- shapes smaller than 1,25 mm
- clearance smaller 0,1 mm

SLUG-SNAP (SPECIAL VERSION - ADDITIONAL COSTS)

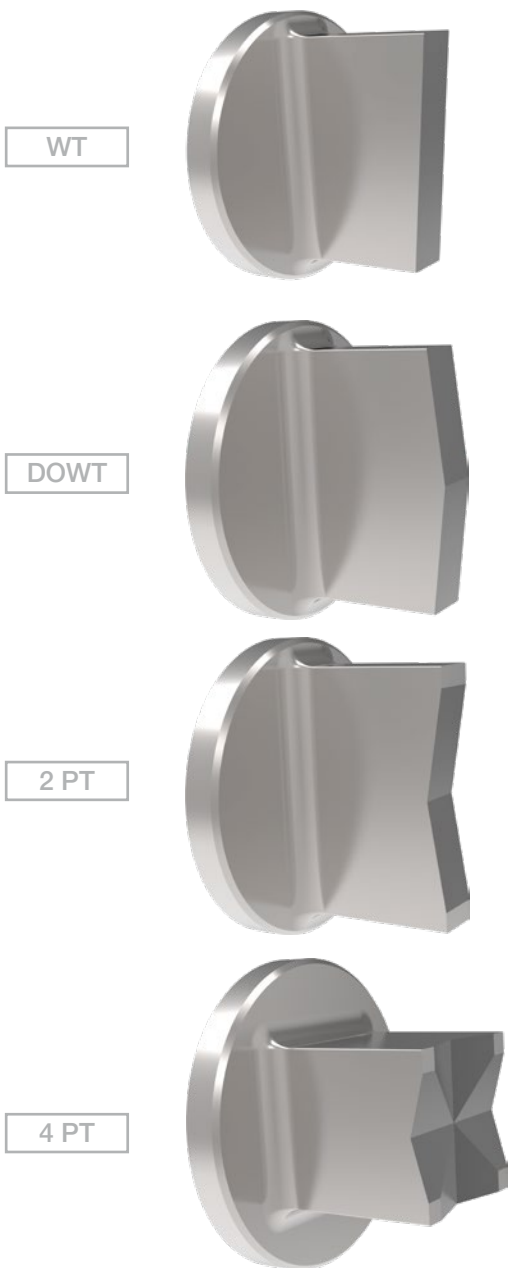


Alternatively we offer our slug-snap version (additional costs).

In this case special holding bolts are included in the die, clamping the slug positively (better than the slug-stop version).

The slug-snap version is also more convenient for shapes smaller than 1,25 mm and clearance smaller 0,1 mm.

PUNCHES WITH DIFFERENT SHEAR TYPES



DESCRIPTION

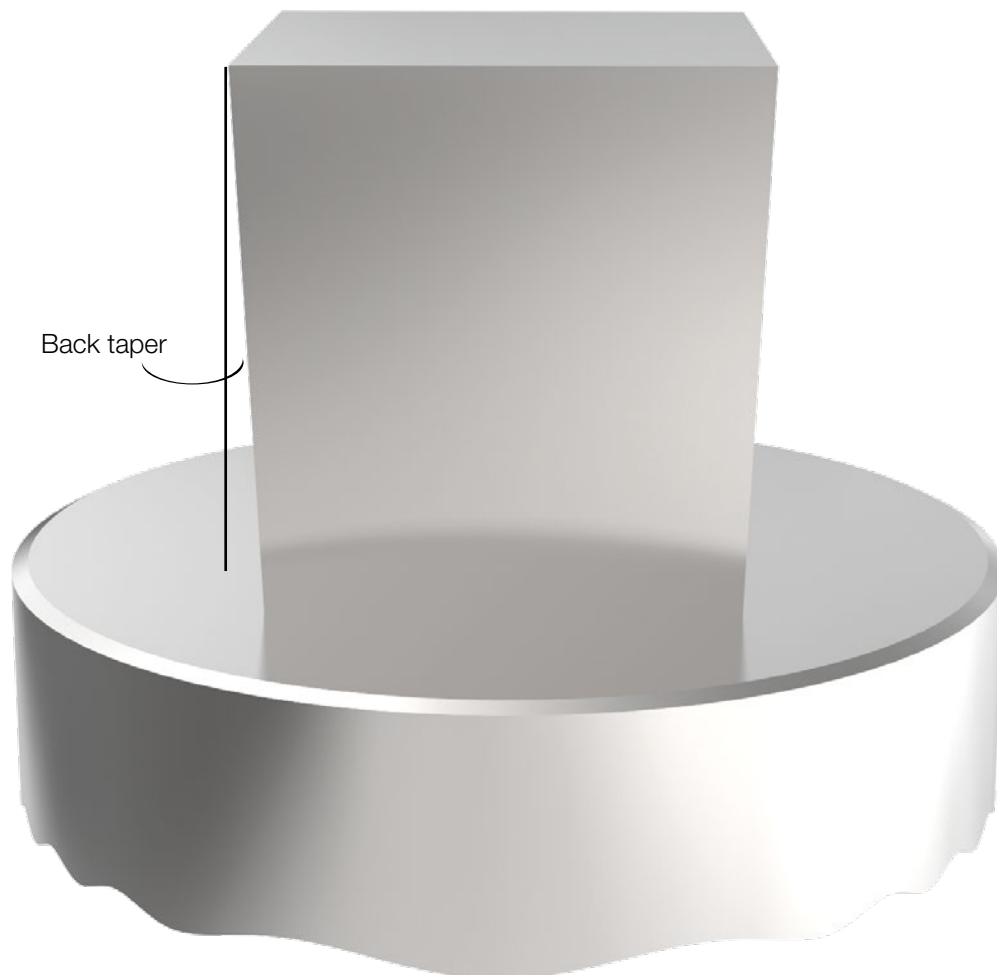
	DESCRIPTION
WT	
Advantage	easy regrindable
Disadvantage	lateral forces
DOWT	
Advantages	easy regrindable no lateral forces
Disadvantage	only reasonable for big shapes
2 PT	
Advantages	no lateral forces optimal die cutting
Disadvantages	only reasonable for big and slim shapes difficult to regrind
4 PT	
Advantages	no lateral forces optimal die cutting suitable for trimming
Disadvantages	only reasonable for big shapes difficult to regrind

PASS BACK TAPER ON PUNCHES

PASS punches are normally produced with back taper to reduce galling and premature punch wear.

However it should be mentioned that back taper is very important when punching materials such as stainless steel or very thick material to reduce galling and eliminate breakage of the tool corners and edges.

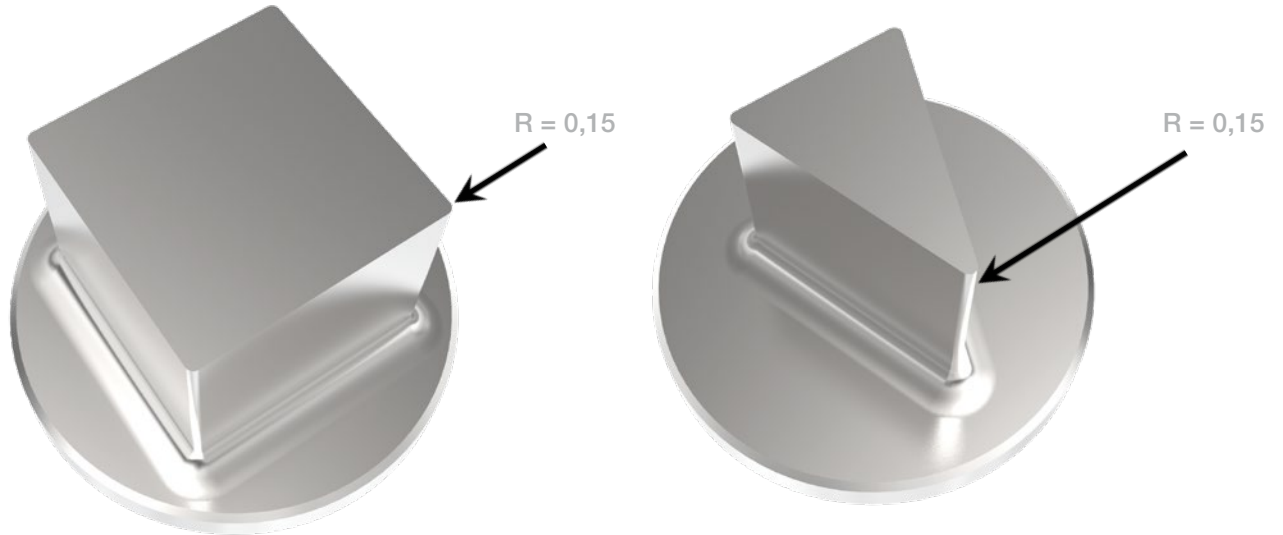
We recommend a line polished version for cutting parts, which have to be produced sink-eroded (special shape with internal shape, e.g. cross-form, U-form, etc.) and in high quality sheets.



PASS CORNER RADIUS ON PUNCHES

PASS punches are automatically produced with corner radius $R = 0,15$ mm. This process increases the lifetime as the corner abrasive wear will be decreased considerably.

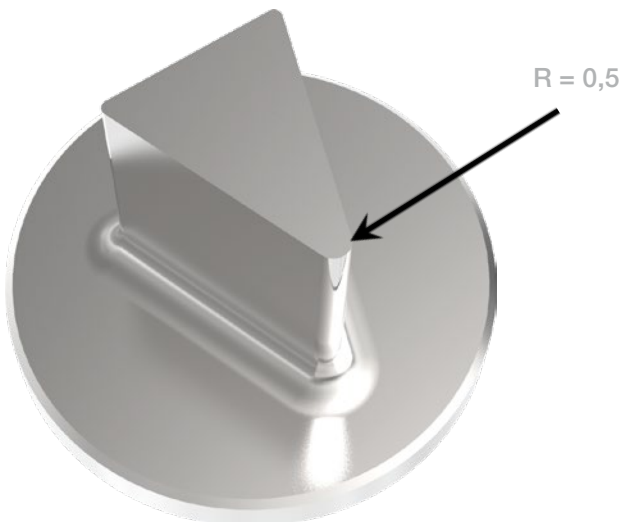
E.g.: square and triangle punch



The corner radius can be changed on customer's request.

E.g.:

$R = 0,5$ mm instead of $R = 0,15$ mm for stainless steel in order to increase tool life.



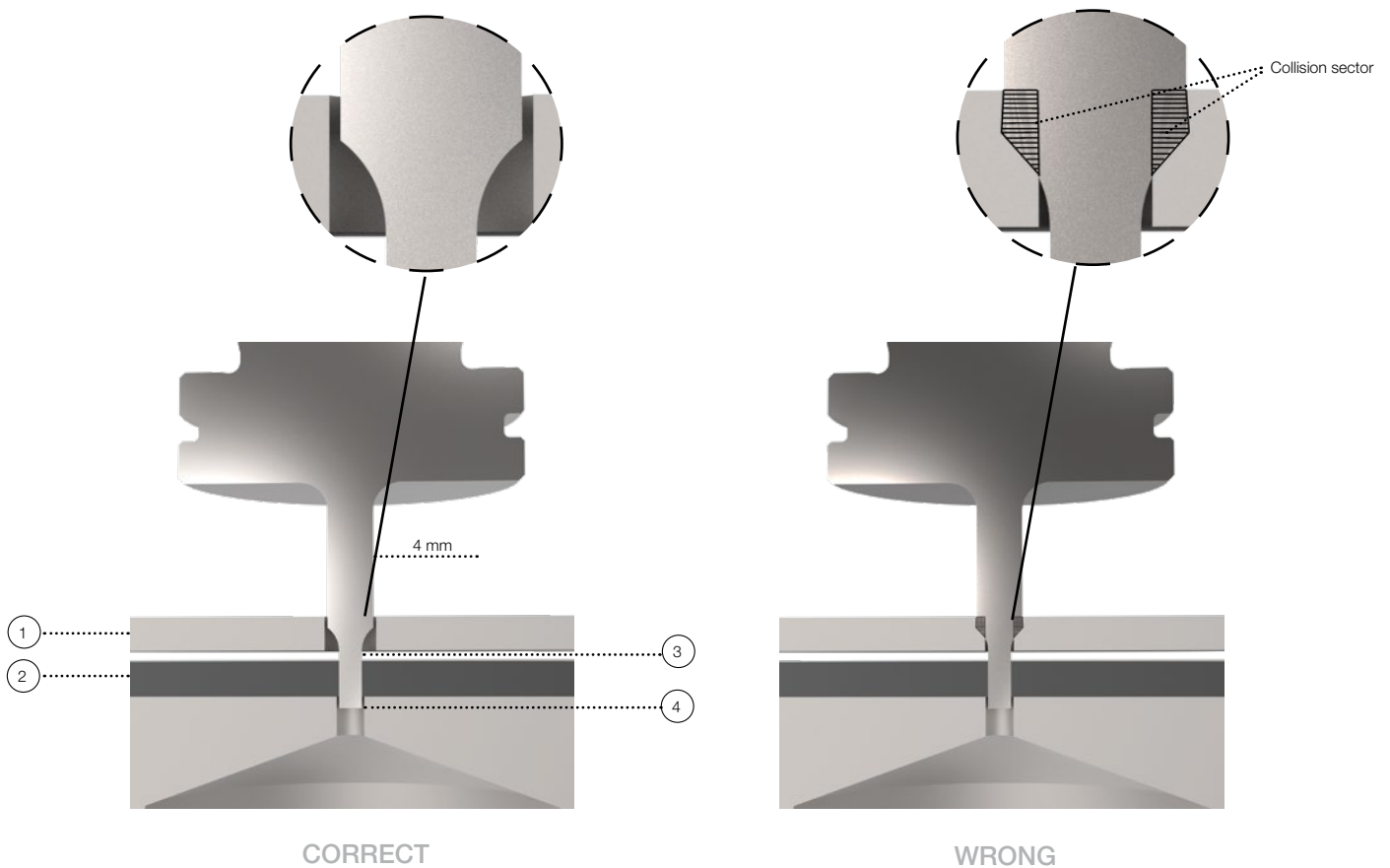
PASS PUNCHES WITH REINFORCED SHOULDER

All PASS punches are produced with a 4 mm reinforced shoulder as soon as the cutting section is required smaller than 4 mm.

This guarantees that you will get a tool with highest stability in order to punch also thicker and high-strength sheets.

However, the correct stripper size has to be selected in subject to machine type, tool design, sheet thickness (1), punching depth (2), stripper thickness (3) and stripper overlap (4).

It might be possible that it gets necessary to use a stripper with an appropriate big shape (width min. 4,5 mm) in order to get sure that the reinforced punch shoulder can immerse into the stripper.



NOTES

A large grid of graph paper for taking notes, consisting of 20 columns and 40 rows of small squares.

A		I		S	
Accessories	43	Increase in lifetime of tools	72, 76	Slitting close to embossing	
Adapter rings	45, 56	Informationen	69	5 x 56	31
Adjusting rings	44	L		5 x 56 (PU)	32
Adjusting rings (manual)	56	Lifetime of tools	71	5 x 76,2 (PU)	33
Adjustment	49	Line polished version	72, 75	Slitting punch blade insert	28, 29, 30, 31
Adjustment unit	46	M		Slitting tools	25
A-MAX	72	Multitool		5 x 30	28
A-MAX coating	64	10-station die	22	5 x 56	29, 31, 32
B		Machine group H and TC260	20, 21	5 x 76,2	30, 33
Back taper	75	Multitool 4-station	20	Integrated adjusting ring	28
C		Multitool 6-station	21	slug-snap	73
Centre punch tool	36, 37	Multitools	17	slug-snap for dies	67
Coating	64	P		slug-stop	73
Coating versions	72	PASS punches	77	Soft pads	48
Compensating rings	47	Polishing	65	Special shape	
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D		ps:®MT10-TP cutting die	22	Specific tooling for Boschert	53
Die carrier	50	ps:®MT10-TP for embossing	40	Standard tools	5
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E		ps:®single-thread-TP	41	Square	7
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HWS		R		Tool variety	70
Tool variety	70	Reinforced shoulder	77	X	
		Round punch	14	X3-PM	
		RTC cartridge	50	Tool variety	70
				X8-PM	
				Tool variety	70

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