



TRUMPF

THICK TURRET

SALVAGNINI

PRICE LIST 03/2023-WW-A.2
SYSTEM AMADA

PRICE LIST 03/2023-WW-A.2



VALIDITY OF PRICES:

This price list is valid from 01.03.2023. From this date old price lists lose their validity. The prices do not include statutory value added tax.

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.

CONDITIONS OF PAYMENT:

Unless otherwise stipulated, our invoices are payable in full 30 days after the submission of the invoice.

GENERAL REMARKS:

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

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PASS TOOLS FOR YOUR AMADA SYSTEM

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PASS STANDARD I STATION A

DIAMETER UP TO 12,7 MM



HEAD UNIT

Hexagon head screw for simply assembling of punch assembly

Spring for sheet thickness up to 6 mm

2 mm length adjustment by turning of the distance ring

PUNCH BODY

Metric thread M12 x 1,25

Punch body made with premium H-PM®

Alignment pin with double D for exact adjustment



PUNCH GUIDE

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Keyway position:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-90-225°

Asym. shapes: 0-90-180-270°

Tool shapes integrated in guide

PASS STANDARD I STATION A

DIAMETER UP TO 12,7 MM

		PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY			
	Round	4012A01	131,25
	Square	4012A02	240,81
	Rectangle	4012A03	240,81
	Oblong	4012A04	240,81
	O.D. Ground Special Shape	4012A0G	262,43
	EDM Required Special Shape	4012A0E	435,70
HEAD UNIT (HEAD SCREW, SPRING, DISTANCE RING)			
	For all shapes	4092A01	43,32
PUNCH BODY (H-PM®)			
	Round	4022A01	34,43
	Square	4022A02	78,98
	Rectangle	4022A03	78,98
	Oblong	4022A04	78,98
	O.D. Ground Special Shape	4022A0G	94,27
	EDM Required Special Shape	4022A0E	249,70
PUNCH GUIDE			
	Round	4032A01	53,50
	Square	4032A02	118,51
	Rectangle	4032A03	118,51
	Oblong	4032A04	118,51
	O.D. Ground Special Shape	4032A0G	124,85
	EDM Required Special Shape	4032A0E	142,68
DIE (HWS)			
	Round	4052A01	26,10
	Square	4052A02	50,95
	Rectangle	4052A03	50,95
	Oblong	4052A04	50,95
	O.D. Ground Special Shape	4052A0G	63,71
	EDM Required Special Shape	4052A0E	71,34



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH		
Head screw	4092A31	14,05	TICN coating	32,31
Spring	4092A11	19,14	T-MAX coating	54,69
Distance ring	4092A21	10,20	A-MAX coating	48,48
O-Ring (in punch guide)	4092A51	2,54	WT-shear	18,64
PU ejector Ø 3x6 (in punch)	4092P03	1,31	DOWT-shear	18,64
PU ejector Ø 6x10 (in punch)	4092P06	1,31	2 PT-shear	22,38
			4 PT-shear	27,33
			Cutting part under 1,00 mm	+ 40 %
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE		
Piece (2 mm)	499A4S2	6,40	Additional keyway	120,56
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES		
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	16,59	Reinforced die	8,69
Shimkeeper (0,5 mm)	499A1M95	10,20	H-PM® Quality	8,95
			Additional pin hole	16,17

ps:[®]alpha I STATION A

DIAMETER UP TO 12,7 MM



HEAD UNIT

Canister for sheet thickness up to 4 mm

Continuously and easy length adjustment in assembled status



PUNCH BODY

Metric thread M12 x 1,25

Punch body made with premium H-PM[®]

Alignment pin with double D for exact adjustment



PUNCH GUIDE

Surface-hardened and polished punch guide for sheet thickness up to 4 mm

Keyway position:

All shapes: 0- 90°-225°



STRIPPER

Interchangeable stripper plate

ps:[®]alpha I STATION A

DIAMETER UP TO 12,7 MM

		PART-NO.	PRICE IN €	
COMPLETE PUNCH ASSEMBLY				
	Round	4013A01	352,92	
	Square	4013A02	422,96	
	Rectangle	4013A03	422,96	
	Oblong	4013A04	422,96	
	O.D. Ground Special Shape	4013A0G	445,88	
	EDM Required Special Shape	4013A0E	607,72	
HEAD UNIT				
	For all shapes	4093A01	137,58	
PUNCH BODY (H-PM[®])				
	Round	4023A01	34,43	
	Square	4023A02	78,98	
	Rectangle	4023A03	78,98	
	Oblong	4023A04	78,98	
	O.D. Ground Special Shape	4023A0G	94,27	
	EDM Required Special Shape	4023A0E	249,70	
PUNCH GUIDE				
	For all shapes	4033A05	168,17	
STRIPPER				
	Round	4043A01	12,74	
	Square	4043A02	38,22	
	Rectangle	4043A03	38,22	
	Oblong	4043A04	38,22	
	O.D. Ground Special Shape	4043A0G	45,86	
	EDM Required Special Shape	4043A0E	52,26	
DIE (HWS)				
	Round	4052A01	26,10	
	Square	4052A02	50,95	
	Rectangle	4052A03	50,95	
	Oblong	4052A04	50,95	
	O.D. Ground Special Shape	4052A0G	63,71	
	EDM Required Special Shape	4052A0E	71,34	
SPARE PARTS		ADDITIONAL COSTS FOR PUNCH		
O-Ring (in punch guide)	4092A51	2,54	TiCN coating	32,31
PU ejector Ø 3x6 (in punch)	4092P03	1,31	T-MAX coating	54,69
PU ejector Ø 6x10 (in punch)	4092P06	1,31	A-MAX coating	48,48
			WT-shear	18,64
			DOWT-shear	18,64
			2 PT-shear	22,38
			4 PT-shear	27,33
			Cutting part under 1,00 mm	+ 40 %
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE		
Not necessary			Additional keyway	120,56
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES		
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	16,59	Reinforced die	8,69
Shimkeeper (0,5 mm)	499A1M95	10,20	H-PM [®] Quality	8,95
			Additional pin hole	16,17



ps:[®]alpha-compact I STATION A

DIAMETER UP TO 12,7 MM



HEAD UNIT

Canister for sheet thickness up to 4 mm

Continously and easy length adjustment in assembled status



PUNCH BODY

Metric thread M12 x 1,25

Punch body made with premium H-PM[®]

Alignment pin with double D for exact adjustment



PUNCH GUIDE

Surface-hardened and polished punch guide for sheet thickness up to 4 mm

Keyway position:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-90-225°

Asym. shapes: 0-90-180-270°

Tool shapes integrated in guide

ps:[®]alpha-compact I STATION A

DIAMETER UP TO 12,7 MM

		PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY			
	Round	4017A01	225,51
	Square	4017A02	335,08
	Rectangle	4017A03	335,08
	Oblong	4017A04	335,08
	O.D. Ground Special Shape	4017A0G	356,71
	EDM Required Special Shape	4017A0E	529,96



HEAD UNIT			
	For all shapes	4093A01	137,58

PUNCH BODY (H-PM[®])			
	Round	4023A01	34,43
	Square	4023A02	78,98
	Rectangle	4023A03	78,98
	Oblong	4023A04	78,98
	O.D. Ground Special Shape	4023A0G	94,27
	EDM Required Special Shape	4023A0E	249,70

PUNCH GUIDE			
	Round	4032A01	53,50
	Square	4032A02	118,51
	Rectangle	4032A03	118,51
	Oblong	4032A04	118,51
	O.D. Ground Special Shape	4032A0G	124,85
	EDM Required Special Shape	4032A0E	142,68

DIE (HWS)			
	Round	4052A01	26,10
	Square	4052A02	50,95
	Rectangle	4052A03	50,95
	Oblong	4052A04	50,95
	O.D. Ground Special Shape	4052A0G	63,71
	EDM Required Special Shape	4052A0E	71,34



SPARE PARTS			
O-Ring (in punch guide)	4092A51	2,54	TiCN coating 32,31
PU ejector Ø 3x6 (in punch)	4092P03	1,31	T-MAX coating 54,69
PU ejector Ø 6x10 (in punch)	4092P06	1,31	A-MAX coating 48,48
			WT-shear 18,64
			DOWT-shear 18,64
			2 PT-shear 22,38
			4 PT-shear 27,33
			Cutting part under 1,00 mm + 40 %

COMPENSATING SHIM FOR PUNCH			
Not necessary		Additional keyway	120,56

SET OF COMPENSATING SHIMS FOR DIE			
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	16,59	Reinforced die 8,69
Shimkeeper (0,5 mm)	499A1M95	10,20	H-PM [®] Quality 8,95
			Additional pin hole 16,17

ps:[®]beta-V2[®] ABS I STATION A

DIAMETER UP TO 12,7 MM



HEAD UNIT

Canister for sheet thickness up to 6 mm

Spring

10 mm length adjustment by thread

Oil channel for sheet lubrication

On request, suitable for PDC-system



PUNCH BODY

Oil channel for sheet lubrication

Alignment pin with double D for exact adjustment

Punch body made with premium H-PM[®]



PUNCH GUIDE

Simple length adjustment in assembled state by pressing the locking button

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Keyway position:

All shapes: 0-90-225°



STRIPPER

Interchangeable stripper plate with oil channels

ps:[®]beta-V2[®] ABS I STATION A

DIAMETER UP TO 12,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4019A01	433,27
Square	4019A02	514,80
Rectangle	4019A03	514,80
Oblong	4019A04	514,80
O.D. Ground Special Shape	4019A0G	542,82
EDM Required Special Shape	4019A0E	709,68
HEAD UNIT		
For all shapes	4099A10	118,51



Head unit
for PDC-system
(without extra charge)

Part.-no. „see left“-PDC
e.g.: 4019A01-PDC

	PART-NO.	PRICE IN €
PUNCH BODY (H-PM[®])		
Round	4029A01	59,91
Square	4029A02	110,87
Rectangle	4029A03	110,87
Oblong	4029A04	110,87
O.D. Ground Special Shape	4029A0G	131,25
EDM Required Special Shape	4029A0E	291,76
PUNCH GUIDE		
For all shapes	4039A05	228,07

	PART-NO.	PRICE IN €
STRIPPER		
Round	4049A01	26,78
Square	4049A02	57,35
Rectangle	4049A03	57,35
Oblong	4049A04	57,35
O.D. Ground Special Shape	4049A0G	65,02
EDM Required Special Shape	4049A0E	71,34



	PART-NO.	PRICE IN €
DIE (HWS)		
Round	4052A01	26,10
Square	4052A02	50,95
Rectangle	4052A03	50,95
Oblong	4052A04	50,95
O.D. Ground Special Shape	4052A0G	63,71
EDM Required Special Shape	4052A0E	71,34



		ADDITIONAL COSTS FOR PUNCH	
O-Ring (in punch guide)	4092A51	2,54	TiCN coating 32,31
PU ejector Ø 3x6 (in punch)	4092P03	1,31	T-MAX coating 54,69
PU ejector Ø 6x10 (in punch)	4092P06	1,31	A-MAX coating 48,48
			WT-shear 18,64
			DOWT-shear 18,64
			2 PT-shear 22,38
			4 PT-shear 27,33
			Cutting part under 1,00 mm + 40 %

		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	120,56

		ADDITIONAL COSTS FOR DIES	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	16,59	Reinforced die 8,69
Shimkeeper (0,5 mm)	499A1M95	10,20	H-PM [®] Quality 8,95
			ps: [®] tornado-die (vacuum-style) 8,69
			Additional pin hole 16,17

ps:[®]beta-compact ABS I STATION A

DIAMETER UP TO 12,7 MM



HEAD UNIT

Canister for sheet thickness up to 6 mm

Spring

10 mm length adjustment by thread

Oil channel for sheet lubrication

On request, suitable for PDC-system



PUNCH BODY

Oil channel for sheet lubrication

Alignment pin with double D for exact adjustment

Punch body made with premium H-PM[®]



PUNCH GUIDE

Simple length adjustment in assembled state
by pressing the locking button

Surface-hardened and polished punch guide
for sheet thickness up to 6 mm

Keyway position:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-45-90-135°

Asym. shapes: 0-90-180-270°

Tool shapes integrated in guide

ps:[®]beta-compact ABS I STATION A

DIAMETER UP TO 12,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4018A01	315,94
Square	4018A02	433,16
Rectangle	4018A03	433,16
Oblong	4018A04	433,16
O.D. Ground Special Shape	4018A0G	459,93
EDM Required Special Shape	4018A0E	638,28



Head unit
for PDC-system
(without extra charge)

Part.-no. „see left“-PDC
e.g.: 4018A01-PDC

HEAD UNIT		
For all shapes	4095A10	118,51

PUNCH BODY (H-PM[®])		
Round	4025A01	59,91
Square	4025A02	110,87
Rectangle	4025A03	110,87
Oblong	4025A04	110,87
O.D. Ground Special Shape	4025A0G	131,25
EDM Required Special Shape	4025A0E	291,76

PUNCH GUIDE		
Round	4038A01	137,58
Square	4038A02	203,83
Rectangle	4038A03	203,83
Oblong	4038A04	203,83
O.D. Ground Special Shape	4038A0G	210,23
EDM Required Special Shape	4038A0E	228,07

DIE (HWS)		
Round	4052A01	26,10
Square	4052A02	50,95
Rectangle	4052A03	50,95
Oblong	4052A04	50,95
O.D. Ground Special Shape	4052A0G	63,71
EDM Required Special Shape	4052A0E	71,34



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH	
O-Ring (in punch guide)	4092A51	2,54	TiCN coating 32,31
PU ejector Ø 3x6 (in punch)	4092P03	1,31	T-MAX coating 54,69
PU ejector Ø 6x10 (in punch)	4092P06	1,31	A-MAX coating 48,48
			WT-shear 18,64
			DOWT-shear 18,64
			2 PT-shear 22,38
			4 PT-shear 27,33
			Cutting part under 1,00 mm + 40 %

COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	120,56

SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	16,59	Reinforced die 8,69
Shimkeeper (0,5 mm)	499A1M95	10,20	H-PM [®] Quality 8,95
			ps: [®] tornado-die (vacuum-style) 8,69
			Additional pin hole 16,17

ps:[®]alpha ABS I STATION A

DIAMETER UP TO 12,7 MM



HEAD UNIT

Canister for sheet thickness up to 4 mm

Continuously and easy length adjustment
in assembled status

Oil channel for sheet lubrication



PUNCH BODY

Metric thread M12 x 1,25

Oil channel for sheet lubrication

Punch body made with premium H-PM[®]

Alignment pin with double D for exact adjustment



PUNCH GUIDE

Surface-hardened and polished punch
guide for sheet thickness up to 4 mm

Keyway position:
All shapes: 0-90-225°



STRIPPER

Interchangeable stripper plate with oil channels

ps:[®]alpha ABS I STATION A

DIAMETER UP TO 12,7 MM

	PART-NO.	PRICE IN €	
COMPLETE PUNCH ASSEMBLY			
Round	40110A01	388,10	
Square	40110A02	464,46	
Rectangle	40110A03	464,46	
Oblong	40110A04	464,46	
O.D. Ground Special Shape	40110A0G	512,25	
EDM Required Special Shape	40110A0E	674,02	
HEAD UNIT			
For all shapes	40910A10	137,58	
PUNCH BODY (H-PM[®])			
Round	40210A01	56,80	
Square	40210A02	101,36	
Rectangle	40210A03	101,36	
Oblong	40210A04	101,36	
O.D. Ground Special Shape	40210A0G	141,50	
EDM Required Special Shape	40210A0E	296,92	
PUNCH GUIDE			
For all shapes	40310A05	168,17	
STRIPPER			
Round	40410A01	26,78	
Square	40410A02	57,35	
Rectangle	40410A03	57,35	
Oblong	40410A04	57,35	
O.D. Ground Special Shape	40410A0G	65,02	
EDM Required Special Shape	40410A0E	71,34	
DIE (HWS)			
Round	4052A01	26,10	
Square	4052A02	50,95	
Rectangle	4052A03	50,95	
Oblong	4052A04	50,95	
O.D. Ground Special Shape	4052A0G	63,71	
EDM Required Special Shape	4052A0E	71,34	
SPARE PARTS			
ADDITIONAL COSTS FOR PUNCH			
O-Ring (in punch guide)	4092A51	2,54	TiCN coating
PU ejector Ø 3x6 (in punch)	4092P03	1,31	T-MAX coating
PU ejector Ø 6x10 (in punch)	4092P06	1,31	A-MAX coating
			WT-shear
			DOWT-shear
			2 PT-shear
			4 PT-shear
			Cutting part under 1,00 mm
			+ 40 %
COMPENSATING SHIM FOR PUNCH			
Not necessary			ADDITIONAL COSTS FOR PUNCH GUIDE
			Additional keyway
			120,56
SET OF COMPENSATING SHIMS FOR DIE			
ADDITIONAL COSTS FOR DIES			
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	16,59	Reinforced die
Shimkeeper (0,5 mm)	499A1M95	10,20	H-PM [®] Quality
			ps: [®] tornado-die (vacuum-style)
			Additional pin hole
			16,17



PASS STANDARD I STATION B

DIAMETER UP TO 31,57 MM



HEAD UNIT

Hexagon head screw for simply assembling of punch assembly

Spring for sheet thickness up to 6 mm

2 mm length adjustment by turning of the distance ring

PUNCH BODY

Metric thread M20 x 1,5

Punch body made with premium H-PM®

Alignment pin with double D for exact adjustment



PUNCH GUIDE

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Keyway position:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-90-225°

Asym. shapes: 0-90-180-270°

Tool shapes integrated in guide

PASS STANDARD I STATION B

DIAMETER UP TO 31,75 MM



		PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY			
	Round	4012B01	174,56
	Square	4012B02	286,66
	Rectangle	4012B03	286,66
	Oblong	4012B04	286,66
	O.D. Ground Special Shape	4012B0G	308,30
	EDM Required Special Shape	4012B0E	480,30

HEAD UNIT (HEAD SCREW, SPRING, DISTANCE RING)			
	For all shapes	4092B01	63,71

PUNCH BODY (H-PM®)			
	Round	4022B01	50,95
	Square	4022B02	99,37
	Rectangle	4022B03	99,37
	Oblong	4022B04	99,37
	O.D. Ground Special Shape	4022B0G	114,66
	EDM Required Special Shape	4022B0E	268,83

PUNCH GUIDE			
	Round	4032B01	59,91
	Square	4032B02	123,61
	Rectangle	4032B03	123,61
	Oblong	4032B04	123,61
	O.D. Ground Special Shape	4032B0G	129,96
	EDM Required Special Shape	4032B0E	147,79

DIE (HWS)			
	Round	4052B01	27,33
	Square	4052B02	65,02
	Rectangle	4052B03	65,02
	Oblong	4052B04	65,02
	O.D. Ground Special Shape	4052B0G	78,98
	EDM Required Special Shape	4052B0E	85,38

SPARE PARTS		ADDITIONAL COSTS FOR PUNCH		
Head screw	4092B31	14,05	TICN coating	49,71
Spring	4092B11	40,76	T-MAX coating	84,51
Distance ring	4092B21	10,20	A-MAX coating	74,57
O-Ring (in punch guide)	4092B51	2,54	WT-shear	18,64
PU ejector Ø 3x6 (in punch)	4092P03	1,31	DOWT-shear	18,64
PU ejector Ø 6x10 (in punch)	4092P06	1,31	2 PT-shear	22,38
			4 PT-shear	27,33
			Cutting part under 1,00 mm	+ 40 %

COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE		
Piece (2 mm)	499B4S2	7,64	Additional keyway	120,56

SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES		
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	20,38	Reinforced die	8,69
Shimkeeper (0,5 mm)	499B1M95	11,49	H-PM® Quality	8,95
			Additional pin hole	16,17

ps:[®]alpha I STATION B

DIAMETER UP TO 31,75 MM



HEAD UNIT

Canister for sheet thickness up to 4 mm

Continuously and easy length adjustment
in assembled status



PUNCH BODY

Metric thread M20 x 1,5

Punch body made with premium H-PM[®]

Alignment pin with double D for exact adjustment



PUNCH GUIDE

Surface-hardened and polished punch
guide for sheet thickness up to 4 mm

Keyway position:

All shapes: 0-45-90-180-270°



STRIPPER

Interchangeable stripper plate

ps:[®]alpha I STATION B

DIAMETER UP TO 31,75 MM



	PART-NO.	PRICE IN €	
COMPLETE PUNCH ASSEMBLY			
Round	4013B01	412,82	
Square	4013B02	486,66	
Rectangle	4013B03	486,66	
Oblong	4013B04	486,66	
O.D. Ground Special Shape	4013B0G	509,59	
EDM Required Special Shape	4013B0E	670,10	
HEAD UNIT			
For all shapes	4093B01	174,56	
PUNCH BODY (H-PM[®])			
Round	4023B01	50,95	
Square	4023B02	99,37	
Rectangle	4023B03	99,37	
Oblong	4023B04	99,37	
O.D. Ground Special Shape	4023B0G	114,66	
EDM Required Special Shape	4023B0E	268,83	
PUNCH GUIDE			
For all shapes	4033B05	174,56	
STRIPPER			
Round	4043B01	12,74	
Square	4043B02	38,22	
Rectangle	4043B03	38,22	
Oblong	4043B04	38,22	
O.D. Ground Special Shape	4043B0G	45,86	
EDM Required Special Shape	4043B0E	52,26	
DIE (HWS)			
Round	4052B01	27,33	
Square	4052B02	65,02	
Rectangle	4052B03	65,02	
Oblong	4052B04	65,02	
O.D. Ground Special Shape	4052B0G	78,98	
EDM Required Special Shape	4052B0E	85,38	
SPARE PARTS		ADDITIONAL COSTS FOR PUNCH	
O-Ring (in punch guide)	4092B51	2,54	TiCN coating 49,71
PU ejector Ø 3x6 (in punch)	4092P03	1,31	T-MAX coating 84,51
PU ejector Ø 6x10 (in punch)	4092P06	1,31	A-MAX coating 74,57
			WT-shear 18,64
			DOWT-shear 18,64
			2 PT-shear 22,38
			4 PT-shear 27,33
			Cutting part under 1,00 mm + 40 %
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary			Additional keyway 120,56
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	20,38	Reinforced die 8,69
Shimkeeper (0,5 mm)	499B1M95	11,49	H-PM [®] Quality 8,95
			Additional pin hole 16,17

ps:[®]alpha-compact I STATION B

DIAMETER UP TO 31,75 MM



HEAD UNIT

Canister for sheet thickness up to 4 mm

Continuously and easy length adjustment
in assembled status



PUNCH BODY

Metric thread M20 x 1,5

Punch body made with premium H-PM[®]

Alignment pin with double D for exact adjustment



PUNCH GUIDE

Surface-hardened and polished punch
guide for sheet thickness up to 4 mm

Keyway position:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-45-90-135°

Asym. shapes: 0-90-180-270°

Tool shapes integrated in guide

ps:[®]alpha-compact I STATION B

DIAMETER UP TO 31,75 MM



	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4017B01	285,37
Square	4017B02	397,46
Rectangle	4017B03	397,46
Oblong	4017B04	397,46
O.D. Ground Special Shape	4017B0G	419,17
EDM Required Special Shape	4017B0E	591,13

HEAD UNIT		
For all shapes	4093B01	174,56

PUNCH BODY (H-PM[®])		
Round	4023B01	50,95
Square	4023B02	99,37
Rectangle	4023B03	99,37
Oblong	4023B04	99,37
O.D. Ground Special Shape	4023B0G	114,66
EDM Required Special Shape	4023B0E	268,83

PUNCH GUIDE		
Round	4032B01	59,91
Square	4032B02	123,61
Rectangle	4032B03	123,61
Oblong	4032B04	123,61
O.D. Ground Special Shape	4032B0G	129,96
EDM Required Special Shape	4032B0E	147,79

DIE (HWS)		
Round	4052B01	27,33
Square	4052B02	65,02
Rectangle	4052B03	65,02
Oblong	4052B04	65,02
O.D. Ground Special Shape	4052B0G	78,98
EDM Required Special Shape	4052B0E	85,38



		ADDITIONAL COSTS FOR PUNCH	
O-Ring (in punch guide)	4092B51	2,54	TiCN coating 49,71
PU ejector Ø 3x6 (in punch)	4092P03	1,31	T-MAX coating 84,51
PU ejector Ø 6x10 (in punch)	4092P06	1,31	A-MAX coating 74,57
			WT-shear 18,64
			DOWT-shear 18,64
			2 PT-shear 22,38
			4 PT-shear 27,33
			Cutting part under 1,00 mm + 40 %

		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	120,56

		ADDITIONAL COSTS FOR DIES	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	20,38	Reinforced die 8,69
Shimkeeper (0,5 mm)	499B1M95	11,49	H-PM [®] Quality 8,95
			Additional pin hole 16,17

ps:[®]beta-V2[®] ABS I STATION B

DIAMETER UP TO 31,75 MM



HEAD UNIT

Canister for sheet thickness up to 6 mm

Spring

10 mm length adjustment by thread

Oil channel for sheet lubrication

On request, suitable for PDC-system



PUNCH BODY

Oil channel for sheet lubrication

Alignment pin with double D for exact adjustment

Punch body made with premium H-PM[®]



PUNCH GUIDE

Simple length adjustment in assembled state by pressing the locking button

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Keyway position:

All shapes: 0-90-225°



STRIPPER

Interchangeable stripper plate with oil channels

ps:[®]beta-V2[®] ABS I STATION B

DIAMETER UP TO 31,75 MM

	PART-NO.	PRICE IN €		
COMPLETE PUNCH ASSEMBLY				
Round	4019B01	481,68		
Square	4019B02	551,72		
Rectangle	4019B03	551,72		
Oblong	4019B04	551,72		
O.D. Ground Special Shape	4019B0G	579,75		
EDM Required Special Shape	4019B0E	740,26		
HEAD UNIT				
For all shapes	4099B10	136,34		
PUNCH BODY (H-PM[®])				
Round	4029B01	77,75		
Square	4029B02	117,20		
Rectangle	4029B03	117,20		
Oblong	4029B04	117,20		
O.D. Ground Special Shape	4029B0G	137,58		
EDM Required Special Shape	4029B0E	291,76		
PUNCH GUIDE				
For all shapes	4039B05	240,81		
STRIPPER				
Round	4049B01	26,78		
Square	4049B02	57,35		
Rectangle	4049B03	57,35		
Oblong	4049B04	57,35		
O.D. Ground Special Shape	4049B0G	65,02		
EDM Required Special Shape	4049B0E	71,34		
DIE (HWS)				
Round	4052B01	27,33		
Square	4052B02	65,02		
Rectangle	4052B03	65,02		
Oblong	4052B04	65,02		
O.D. Ground Special Shape	4052B0G	78,98		
EDM Required Special Shape	4052B0E	85,38		
SPARE PARTS				
O-Ring (in punch guide)				
O-Ring (in punch guide)	4092B51	2,54	TiCN coating	49,71
PU ejector Ø 3x6 (in punch)	4092P03	1,31	T-MAX coating	84,51
PU ejector Ø 6x10 (in punch)	4092P06	1,31	A-MAX coating	74,57
			WT-shear	18,64
			DOWT-shear	18,64
			2 PT-shear	22,38
			4 PT-shear	27,33
			Cutting part under 1,00 mm	+ 40 %
COMPENSATING SHIM FOR PUNCH				
Not necessary			Additional keyway	120,56
SET OF COMPENSATING SHIMS FOR DIE				
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	20,38	Reinforced die	8,69
Shimkeeper (0,5 mm)	499B1M95	11,49	H-PM [®] Quality	8,95
			ps: [®] tornado-die (vacuum-style)	8,69
			Additional pin hole	16,17



Head unit
for PDC-system
(without extra charge)

Part.-no. „see left“-PDC
e.g.: 4019B01-PDC



ps:[®]beta-compact ABS I STATION B

DIAMETER UP TO 31,75 MM



HEAD UNIT

Canister for sheet thickness up to 6 mm

Spring

10 mm length adjustment by thread

Oil channel for sheet lubrication

On request, suitable for PDC-system



PUNCH BODY

Oil channel for sheet lubrication

Alignment pin with double D for exact adjustment

Punch body made with premium H-PM[®]



PUNCH GUIDE

Simple length adjustment in assembled state
by pressing the locking button

Surface-hardened and polished punch guide
for sheet thickness up to 6 mm

Keyway position:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-45-90-135°

Asym. shapes: 0-90-180-270°

Tool shapes integrated in guide

ps:[®]beta-compact ABS I STATION B

DIAMETER UP TO 31,75 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4018B01	358,01
Square	4018B02	461,17
Rectangle	4018B03	461,17
Oblong	4018B04	461,17
O.D. Ground Special Shape	4018B0G	487,95
EDM Required Special Shape	4018B0E	659,91



Head unit
for PDC-system
(without extra charge)

Part.-no. „see left“-PDC
e.g.: 4018B01-PDC

HEAD UNIT		
For all shapes	4095B10	136,34

PUNCH BODY (H-PM[®])		
Round	4025B01	77,75
Square	4025B02	117,20
Rectangle	4025B03	117,20
Oblong	4025B04	117,20
O.D. Ground Special Shape	4025B0G	137,58
EDM Required Special Shape	4025B0E	291,76

PUNCH GUIDE		
Round	4038B01	144,00
Square	4038B02	207,68
Rectangle	4038B03	207,68
Oblong	4038B04	207,68
O.D. Ground Special Shape	4038B0G	214,03
EDM Required Special Shape	4038B0E	231,88

DIE (HWS)		
Round	4052B01	27,33
Square	4052B02	65,02
Rectangle	4052B03	65,02
Oblong	4052B04	65,02
O.D. Ground Special Shape	4052B0G	78,98
EDM Required Special Shape	4052B0E	85,38



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH	
O-Ring (in punch guide)	4092B51	2,54	TiCN coating 49,71
PU ejector Ø 3x6 (in punch)	4092P03	1,31	T-MAX coating 84,51
PU ejector Ø 6x10 (in punch)	4092P06	1,31	A-MAX coating 74,57
			WT-shear 18,64
			DOWT-shear 18,64
			2 PT-shear 22,38
			4 PT-shear 27,33
			Cutting part under 1,00 mm + 40 %
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	120,56

SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	20,38	Reinforced die 8,69
Shimkeeper (0,5 mm)	499B1M95	11,49	H-PM [®] Quality 8,95
			ps: [®] tornado-die (vacuum-style) 8,69
			Additional pin hole 16,17

ps:[®]alpha ABS I STATION B

DIAMETER UP TO 31,75 MM



HEAD UNIT

Canister for sheet thickness up to 4 mm

Continuously and easy length adjustment
in assembled status

Oil channel for sheet lubrication



PUNCH BODY

Metric thread M20 x 1,25

Oil channel for sheet lubrication

Punch body made with premium H-PM[®]

Alignment pin with double D for exact adjustment



PUNCH GUIDE

Surface-hardened and polished punch
guide for sheet thickness up to 4 mm

Keyway position:
All shapes: 0-90-225°



STRIPPER

Interchangeable stripper plate with oil channels

ps:[®]alpha ABS I STATION B

DIAMETER UP TO 31,75 MM



	PART-NO.	PRICE IN €		
COMPLETE PUNCH ASSEMBLY				
Round	40110B01	449,24		
Square	40110B02	528,23		
Rectangle	40110B03	528,23		
Oblong	40110B04	528,23		
O.D. Ground Special Shape	40110B0G	551,16		
EDM Required Special Shape	40110B0E	711,68		
HEAD UNIT				
For all shapes	40910B10	174,56		
PUNCH BODY (H-PM[®])				
Round	40210B01	73,33		
Square	40210B02	121,75		
Rectangle	40210B03	121,75		
Oblong	40210B04	121,75		
O.D. Ground Special Shape	40210B0G	137,03		
EDM Required Special Shape	40210B0E	291,21		
PUNCH GUIDE				
For all shapes	40310B05	174,56		
STRIPPER				
Round	40410B01	26,78		
Square	40410B02	57,35		
Rectangle	40410B03	57,35		
Oblong	40410B04	57,35		
O.D. Ground Special Shape	40410B0G	65,02		
EDM Required Special Shape	40410B0E	71,34		
DIE (HWS)				
Round	4052B01	27,33		
Square	4052B02	65,02		
Rectangle	4052B03	65,02		
Oblong	4052B04	65,02		
O.D. Ground Special Shape	4052B0G	78,98		
EDM Required Special Shape	4052B0E	85,38		
SPARE PARTS				
ADDITIONAL COSTS FOR PUNCH				
O-Ring (in punch guide)	4092B51	2,54	TiCN coating	49,71
PU ejector Ø 3x6 (in punch)	4092P03	1,31	T-MAX coating	84,51
PU ejector Ø 6x10 (in punch)	4092P06	1,31	A-MAX coating	74,57
			WT-shear	18,64
			DOWT-shear	18,64
			2 PT-shear	22,38
			4 PT-shear	27,33
			Cutting part under 1,00 mm	+ 40 %
COMPENSATING SHIM FOR PUNCH				
Not necessary			ADDITIONAL COSTS FOR PUNCH GUIDE	
			Additional keyway	120,56
SET OF COMPENSATING SHIMS FOR DIE				
ADDITIONAL COSTS FOR DIES				
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	20,38	Reinforced die	8,69
Shimkeeper (0,5 mm)	499B1M95	11,49	H-PM [®] Quality	8,95
			ps: [®] tornado-die (vacuum-style)	8,69
			Additional pin hole	16,17

PASS STANDARD I STATION C

DIAMETER UP TO 50,8 MM



GUIDE ASSEMBLY

Screw M12

Disc springs for sheet thickness up to 6 mm

3 mm length adjustment
by using compensating shims

Keyway position: 0-90°

Surface-hardened and polished punch guide for
sheet thickness up to 6 mm

Clamps to fix the strippers



PUNCH BODY

Thread M12

Punch body made with premium H-PM®



STRIPPER

Interchangeable stripper plate

PASS STANDARD I STATION C

DIAMETER UP TO 50,8 MM

		PART-NO.	PRICE IN €
GUIDE ASSEMBLY			
For all shapes	499C01	982,26	
PUNCH BODY (H-PM®)			
Round	4022C01	103,22	
Square	4022C02	180,22	
Rectangle	4022C03	180,22	
Oblong	4022C04	180,22	
O.D. Ground Special Shape	4022C0G	222,98	
EDM Required Special Shape	4022C0E	481,56	
STRIPPER			
Round	4032C01	26,78	
Square	4032C02	50,95	
Rectangle	4032C03	50,95	
Oblong	4032C04	50,95	
O.D. Ground Special Shape	4032C0G	58,60	
EDM Required Special Shape	4032C0E	89,19	
DIE (HWS)			
Round	4052C01	77,75	
Square	4052C02	196,19	
Rectangle	4052C03	196,19	
Oblong	4052C04	196,19	
O.D. Ground Special Shape	4052C0G	210,23	
EDM Required Special Shape	4052C0E	256,10	



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH	
PU ejector Ø 3x6 (in punch)	4092P03	1,31	TiCN coating 73,33
PU ejector Ø 6x10 (in punch)	4092P06	1,31	T-MAX coating 126,77
Set clamps with screws	499C71	16,59	A-MAX coating 110,62
Guiding key with screws	499C63	50,95	WT-shear 0,00 DOWT-shear 0,00 2 PT-shear 31,07 4 PT-shear 37,29 Additional keyway 54,69 Cutting part under 1,00 mm + 40 %
SET OF COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499C1S1	28,03	Additional keyway 146,65
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499C2M1	31,88	H-PM® Quality 14,05 Additional keyway 16,17

ps:[®]beta-V2[®] ABS I STATION C

DIAMETER UP TO 50,8 MM



GUIDE ASSEMBLY

Screw M12

Disc springs for sheet thickness up to 6 mm

Oil channel for sheet lubrication

10 mm length adjustment in assembled state by pressing the locking button

Keyway position: 0-90°

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Fast and easy clamping system for stripper

Suitable for PDC-system



PUNCH BODY

Thread M12 with oil channel for sheet lubrication

Punch body made with premium H-PM[®]



STRIPPER

Interchangeable stripper plate with oil channels

ps:[®]beta-V2[®] ABS I STATION C

DIAMETER UP TO 50,8 MM

	PART-NO.	PRICE IN €
GUIDE ASSEMBLY	For all shapes	4039C01 1645,96

PUNCH BODY (H-PM [®])			
Round	4029C01	129,96	
Square	4029C02	219,74	
Rectangle	4029C03	219,74	
Oblong	4029C04	219,74	
O.D. Ground Special Shape	4029C0G	262,43	
EDM Required Special Shape	4029C0E	522,32	

STRIPPER			
Round	4049C01	100,68	
Square	4049C02	100,68	
Rectangle	4049C03	100,68	
Oblong	4049C04	100,68	
O.D. Ground Special Shape	4049C0G	107,01	
EDM Required Special Shape	4049C0E	113,42	

DIE (HWS)			
Round	4052C01	77,75	
Square	4052C02	196,19	
Rectangle	4052C03	196,19	
Oblong	4052C04	196,19	
O.D. Ground Special Shape	4052C0G	210,23	
EDM Required Special Shape	4052C0E	256,10	



Die with
keyway for PDC-system
+ 16,17 additional costs
Part-No.: „see left“ -2
(e.g.: 4052C04-2)



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH	
PU ejector Ø 3x6 (in punch)	4092P03	1,31	TiCN coating 73,33
PU ejector Ø 6x10 (in punch)	4092P06	1,31	T-MAX coating 126,77
			A-MAX coating 110,62
			WT-shear 0,00
			DOWT-shear 0,00
			2 PT-shear 31,07
			4 PT-shear 37,29
			Additional keyway 54,69
			Cutting part under 1,00 mm + 40 %
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	
		146,65	
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499C2M1	31,88	H-PM [®] Quality 14,05
			Additional keyway 16,17

ps:[®]beta-V2[®] ABS SLITTING TOOL I STATION C



GUIDE ASSEMBLY

Screw M12

Disc springs for sheet thickness up to 6 mm

Oil channel for sheet lubrication

10 mm length adjustment in assembled state by pressing the locking button

Keyway position: 0-90°

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Fast and easy clamping system for stripper

Suitable for PDC-system



SLITTING PUNCH HOLDER

2 fixing threads M6

Thread M12 with oil channel for sheet lubrication



SLITTING PUNCH

Punch body made with premium H-PM[®]

STRIPPER

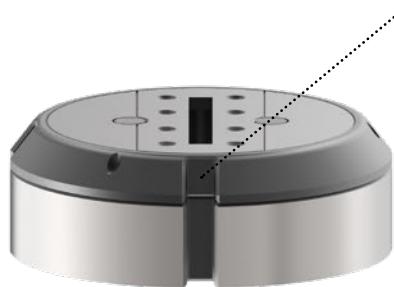
Interchangeable stripper plate with oil channels

ps:[®]beta-V2[®] ABS SLITTING TOOL I STATION C

	PART-NO.	PRICE IN €		
GUIDE ASSEMBLY				
For all shapes	4039C01	1645,96		
SLITTING PUNCH HOLDER				
For all shapes	4229CT00	321,03		
SLITTING PUNCH (MAX. 6,35X50) / (H-PM[®])				
Rectangle	4029CT03	140,13		
Oblong	4029CT04	140,13		
Trapezoid G09	4029CT0G	154,18		
Double Trapezoid E03	4029CT0E	254,78		
STRIPPER				
Rectangle	4049CT03	100,68		
Oblong	4049CT04	100,68		
Trapezoid G09	4049CT0G	107,01		
Double Trapezoid E03	4049CT0E	113,42		
REVERSIBLE PLATE HOLDER				
	4399CT00	384,74		
REVERSIBLE PLATE (H-PM[®])				
Rectangle	4052CT03	113,42		
Oblong	4052CT04	113,42		
Trapezoid G09	4052CT0G	127,41		
Double Trapezoid E03	4052CT0E	154,18		
SPARE PARTS				
PU ejector Ø 3x6 (in punch)				
4092P03	1,31	TiCN coating	65,88	
PU ejector Ø 6x10 (in punch)				
4092P06	1,31	T-MAX coating	113,11	
		A-MAX coating	99,42	
		WT-shear	0,00	
		DOWT-shear	0,00	
		2 PT-shear	31,07	
		4 PT-shear	37,29	
		Additional keyway	54,69	
		Cutting part under 1,00 mm	+ 40 %	
COMPENSATING SHIM FOR SLITTING PUNCH HOLDER				
Not necessary		Additional keyway	146,65	
SET OF COMPENSATING SHIMS FOR REVERSIBLE PLATE				
1x0,4 mm/1x0,8 mm/1x1,2 mm	499CT60	40,76	Additional costs for dies	16,17



Die with
keyway for PDC-system
+ 16,17 additional costs
Part-No.: „see left“ -2
(e.g.: 4399CT00-2)



ps:[®]alpha-V2 ABS I STATION C

DIAMETER UP TO 50,8 MM



GUIDE ASSEMBLY

Screw M14

Disc springs for sheet thickness up to 6 mm

Oil channel for sheet lubrication

10 mm length adjustment in assembled state by pressing the locking button

Keyway position: 0-90°

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Suitable for PDC-system

PUNCH BODY

Thread M14 with oil channel for sheet lubrication

Punch body made with premium H-PM[®]

STRIPPER

Interchangeable stripper plate with oil channels

ps:[®]alpha-V2 ABS I STATION C

DIAMETER UP TO 50,8 MM

	PART-NO.	PRICE IN €
GUIDE ASSEMBLY		
For all shapes	4031C01	1645,96

PUNCH BODY (H-PM[®])			
Round	4021C01	129,96	
Square	4021C02	219,74	
Rectangle	4021C03	219,74	
Oblong	4021C04	219,74	
O.D. Ground Special Shape	4021C0G	262,43	
EDM Required Special Shape	4021C0E	522,32	

STRIPPER			
Round	4041C01	100,68	
Square	4041C02	100,68	
Rectangle	4041C03	100,68	
Oblong	4041C04	100,68	
O.D. Ground Special Shape	4041C0G	107,01	
EDM Required Special Shape	4041C0E	113,42	

DIE (HWS)			
Round	4052C01	77,75	
Square	4052C02	196,19	
Rectangle	4052C03	196,19	
Oblong	4052C04	196,19	
O.D. Ground Special Shape	4052C0G	210,23	
EDM Required Special Shape	4052C0E	256,10	



Die with
keyway for PDC-system
+ 16,17 additional costs
Part-No.: „see left“ -2
(e.g.: 4052C04-2)



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH	
PU ejector Ø 3x6 (in punch)	4092P03	1,31	TiCN coating 73,33
PU ejector Ø 6x10 (in punch)	4092P06	1,31	T-MAX coating 126,77
			A-MAX coating 110,62
			WT-shear 0,00
			DOWT-shear 0,00
			2 PT-shear 31,07
			4 PT-shear 37,29
			Additional keyway 54,69
			Cutting part under 1,00 mm + 40 %

COMPENSATING SHIM FOR PUNCH			
Not necessary			

SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499C2M1	31,88	H-PM [®] Quality 14,05
			Additional keyway 16,17

PASS STANDARD I STATION D

DIAMETER UP TO 88,9 MM



GUIDE ASSEMBLY

Screw M12

Disc springs for sheet thickness up to 6 mm

3 mm length adjustment
by using compensating shims

Keyway position: 0-90°

Surface-hardened and polished punch guide for
sheet thickness up to 6 mm

Clamps to fix the strippers



PUNCH BODY

Thread M12

Punch body made with premium H-PM®



STRIPPER

Interchangeable stripper plate

PASS STANDARD I STATION D

DIAMETER UP TO 88,9 MM

		PART-NO.	PRICE IN €
GUIDE ASSEMBLY			
For all shapes	499D01	1183,55	
PUNCH BODY (H-PM®)			
Round	4022D01	174,56	
Square	4022D02	261,01	
Rectangle	4022D03	261,01	
Oblong	4022D04	261,01	
O.D. Ground Special Shape	4022D0G	324,89	
EDM Required Special Shape	4022D0E	647,17	
STRIPPER			
Round	4032D01	33,12	
Square	4032D02	57,35	
Rectangle	4032D03	57,35	
Oblong	4032D04	57,35	
O.D. Ground Special Shape	4032D0G	62,46	
EDM Required Special Shape	4032D0E	104,46	
DIE (HWS)			
Round	4052D01	119,74	
Square	4052D02	231,88	
Rectangle	4052D03	231,88	
Oblong	4052D04	231,88	
O.D. Ground Special Shape	4052D0G	244,59	
EDM Required Special Shape	4052D0E	303,20	



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH	
PU ejector Ø 3x6 (in punch)	4092P03	1,31	TiCN coating 96,94
PU ejector Ø 6x10 (in punch)	4092P06	1,31	T-MAX coating 166,55
Set clamps with screws	499D71	16,59	A-MAX coating 145,42
Guiding key with screws	499D63	36,97	WT-shear 0,00 DOWT-shear 0,00 2 PT-shear 31,07 4 PT-shear 37,29 Additional keyway 54,69 Cutting part under 1,00 mm + 40 %
SET OF COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499D3S1	35,66	Additional keyway 146,65
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499D2M1	44,61	H-PM® Quality 19,14 Additional keyway 16,17

ps:[®]beta-V2[®] ABS I STATION D

DIAMETER UP TO 88,9 MM



GUIDE ASSEMBLY

Screw M12

Disc springs for sheet thickness up to 6 mm

Oil channel for sheet lubrication

10 mm length adjustment in assembled state by pressing the locking button

Keyway position: 0-90°

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Fast and easy clamping system for stripper

Suitable for PDC-system



PUNCH BODY

Thread M12 with oil channel for sheet lubrication

Punch body made with premium H-PM[®]



STRIPPER

Interchangeable stripper plate with oil channels

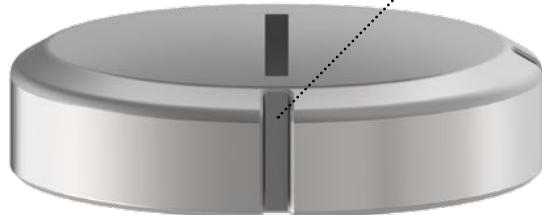
ps:[®]beta-V2[®] ABS I STATION D

DIAMETER UP TO 88,9 MM

	PART-NO.	PRICE IN €		
GUIDE ASSEMBLY				
For all shapes	4039D01	1979,74		
PUNCH BODY (H-PM[®])				
Round	4029D01	201,29		
Square	4029D02	301,77		
Rectangle	4029D03	301,77		
Oblong	4029D04	301,77		
O.D. Ground Special Shape	4029D0G	365,67		
EDM Required Special Shape	4029D0E	687,94		
STRIPPER				
Round	4049D01	114,66		
Square	4049D02	114,66		
Rectangle	4049D03	114,66		
Oblong	4049D04	114,66		
O.D. Ground Special Shape	4049D0G	121,06		
EDM Required Special Shape	4049D0E	127,41		
DIE (HWS)				
Round	4052D01	119,74		
Square	4052D02	231,88		
Rectangle	4052D03	231,88		
Oblong	4052D04	231,88		
O.D. Ground Special Shape	4052D0G	244,59		
EDM Required Special Shape	4052D0E	303,20		
SPARE PARTS				
PU ejector Ø 3x6 (in punch)				
4092P03	1,31	TiCN coating	96,94	
PU ejector Ø 6x10 (in punch)				
4092P06	1,31	T-MAX coating	166,55	
		A-MAX coating	145,42	
		WT-shear	0,00	
		DOWT-shear	0,00	
		2 PT-shear	31,07	
		4 PT-shear	37,29	
		Additional keyway	54,69	
		Cutting part under 1,00 mm	+ 40 %	
COMPENSATING SHIM FOR PUNCH				
Not necessary		Additional keyway	146,65	
SET OF COMPENSATING SHIMS FOR DIE				
1x0,4 mm/1x0,8 mm/1x1,2 mm	499D2M1	44,61	ADDITIONAL COSTS FOR DIES	
			H-PM [®] Quality	19,14
			Additional keyway	16,17



Die with
keyway for PDC-system
+ 16,17 additional costs
Part-No.: „see left“ -2
(e.g.: 4052D04-2)



ps:[®]beta-V2[®] ABS SLITTING TOOL I STATION D



GUIDE ASSEMBLY

Screw M12

Disc springs for sheet thickness up to 6 mm

Oil channel for sheet lubrication

10 mm length adjustment in assembled state by pressing the locking button

Keyway position: 0-90°

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Fast and easy clamping system for stripper

Suitable for PDC-system



SLITTING PUNCH HOLDER

4 fixing threads M6

Thread M12 with oil channel for sheet lubrication

SLITTING PUNCH

Punch body made with premium H-PM[®]



STRIPPER

Interchangeable stripper plate with oil channels

ps:[®]beta-V2[®] ABS SLITTING TOOL I STATION D

	PART-NO.	PRICE IN €	
GUIDE ASSEMBLY			
For all shapes	4039D01	1979,74	
SLITTING PUNCH HOLDER			
For all shapes	4229DT00	380,96	
SLITTING PUNCH (MAX. 6,35X85) / (H-PM[®])			
Rectangle	4029DT03	166,91	
Oblong	4029DT04	166,91	
Trapezoid G09	4029DT0G	180,91	
Double Trapezoid E03	4029DT0E	294,31	
STRIPPER			
Rectangle	4049DT03	114,66	
Oblong	4049DT04	114,66	
Trapezoid G09	4049DT0G	121,06	
Double Trapezoid E03	4049DT0E	127,41	
REVERSIBLE PLATE HOLDER			
	4399DT00	493,05	
REVERSIBLE PLATE (H-PM[®])			
Rectangle	4052DT03	140,13	
Oblong	4052DT04	140,13	
Trapezoid G09	4052DT0G	154,18	
Double Trapezoid E03	4052DT0E	180,91	
SPARE PARTS			
PU ejector Ø 3x6 (in punch)			
4092P03	1,31	TiCN coating	84,51
PU ejector Ø 6x10 (in punch)			
4092P06	1,31	T-MAX coating	146,65
		A-MAX coating	126,77
		WT-shear	0,00
		DOWT-shear	0,00
		2 PT-shear	31,07
		4 PT-shear	37,29
		Additional keyway	54,69
		Cutting part under 1,00 mm	+ 40 %
COMPENSATING SHIM FOR SLITTING PUNCH HOLDER			
Not necessary		Additional keyway	146,65
SET OF COMPENSATING SHIMS FOR REVERSIBLE PLATE			
1x0,4 mm/1x0,8 mm/1x1,2 mm	499DT60	59,91	Additional costs for dies
			Additional keyway
			16,17



ps:[®]beta-V2[®] ABS SLITTING TOOL I STATION D CLOSE TO CLAMP



GUIDE ASSEMBLY

Screw M12

Disc springs for sheet thickness up to 6 mm

Oil channel for sheet lubrication

10 mm length adjustment in assembled state by pressing the locking button

Keyway position: 0-90°

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Fast and easy clamping system for stripper

Suitable for PDC-system



SLITTING PUNCH HOLDER

4 fixing threads M6

Thread M12 with oil channel for sheet lubrication



SLITTING PUNCH

Punch body made with premium H-PM[®]

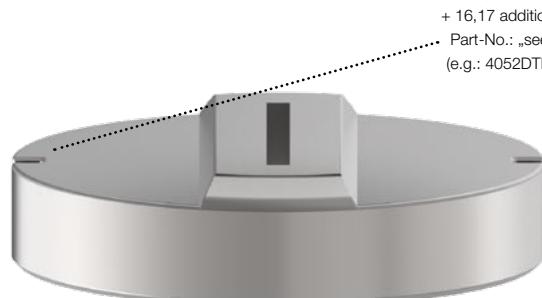
Interchangeable stripper plate with oil channels

One or two-sided relief for punching close to clamp

STRIPPER

ps:[®]beta-V2[®] ABS SLITTING TOOL I STATION D CLOSE TO CLAMP

	PART-NO.	PRICE IN €		
GUIDE ASSEMBLY				
For all shapes	4039DTP01	2247,26		
SLITTING PUNCH HOLDER				
For all shapes	4229DT00	380,96		
SLITTING PUNCH (MAX. 6,35X85) / (H-PM[®])				
Rectangle	4029DT03	166,91		
Oblong	4029DT04	166,91		
Trapezoid G09	4029DT0G	180,91		
Double Trapezoid E03	4029DTOE	294,31		
STRIPPER ONE-SIDED FREE				
Rectangle	4049DTP03-1	289,22		
Oblong	4049DTP04-1	289,22		
Trapezoid G09	4049DTP0G-1	294,31		
Double Trapezoid E03	4049DTP0E-1	300,66		
STRIPPER TWO-SIDED FREE				
Rectangle	4049DTP03-2	289,22		
Oblong	4049DTP04-2	289,22		
Trapezoid G09	4049DTP0G-2	294,31		
Double Trapezoid E03	4049DTP0E-2	300,66		
DIE ONE-SIDED FREE (HWS)				
Rectangle	4052DTP03-1	301,96		
Oblong	4052DTP04-1	301,96		
Trapezoid G09	4052DTP0G-1	363,10		
Double Trapezoid E03	4052DTP0E-1	484,11		
DIE TWO-SIDED FREE (HWS)				
Rectangle	4052DTP03-2	301,96		
Oblong	4052DTP04-2	301,96		
Trapezoid G09	4052DTP0G-2	363,10		
Double Trapezoid E03	4052DTP0E-2	484,11		
SPARE PARTS				
PU ejector Ø 3x6 (in punch)	4092P03	1,31	TiCN coating	84,51
PU ejector Ø 6x10 (in punch)	4092P06	1,31	T-MAX coating	146,65
			A-MAX coating	126,77
			WT-shear	0,00
			DOWT-shear	0,00
			2 PT-shear	31,07
			4 PT-shear	37,29
			Additional keyway	54,69
			Cutting part under 1,00 mm	+ 40 %
SET OF COMPENSATING SHIMS FOR SLITTING PUNCH HOLDER				
Not necessary			Additional keyway	146,65
SET OF COMPENSATING SHIMS FOR DIE				
1x0,4 mm/1x0,8 mm/1x1,2 mm	499D2M1	44,61	ADDITIONAL COSTS FOR DIES	
			H-PM [®] Quality	19,14
			Additional keyway	16,17



Die with
keyway for PDC-system
+ 16,17 additional costs
Part-No.: „see left“ -2
(e.g.: 4052DTP04-2-2)

ps:[®]alpha-V2 ABS I STATION D

DIAMETER UP TO 88,9 MM



GUIDE ASSEMBLY

Screw M14

Disc springs for sheet thickness up to 6 mm

Oil channel for sheet lubrication

10 mm length adjustment in assembled state by pressing the locking button

Keyway position: 0-90°

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Suitable for PDC-system



PUNCH BODY

Thread M14 with oil channel for sheet lubrication

Punch body made with premium H-PM[®]



STRIPPER

Interchangeable stripper plate with oil channels

ps:[®]alpha-V2 ABS I STATION D

DIAMETER UP TO 88,9 MM

	PART-NO.	PRICE IN €
GUIDE ASSEMBLY		
For all shapes	4031D01	1979,74

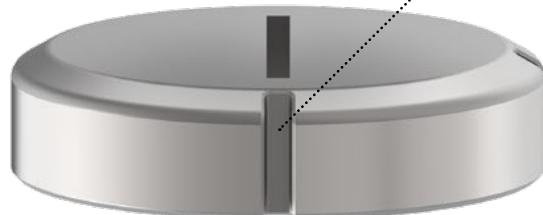
PUNCH BODY (H-PM[®])			
Round	4021D01	201,29	
Square	4021D02	301,77	
Rectangle	4021D03	301,77	
Oblong	4021D04	301,77	
O.D. Ground Special Shape	4021D0G	365,67	
EDM Required Special Shape	4021D0E	687,94	

STRIPPER			
Round	4041D01	114,66	
Square	4041D02	114,66	
Rectangle	4041D03	114,66	
Oblong	4041D04	114,66	
O.D. Ground Special Shape	4041D0G	121,06	
EDM Required Special Shape	4041D0E	127,41	

DIE (HWS)			
Round	4052D01	119,74	
Square	4052D02	231,88	
Rectangle	4052D03	231,88	
Oblong	4052D04	231,88	
O.D. Ground Special Shape	4052D0G	244,59	
EDM Required Special Shape	4052D0E	303,20	



Die with
keyway for PDC-system
+ 16,17 additional costs
Part-No.: „see left“ -2
(e.g.: 4052D04-2)



SPARE PARTS	ADDITIONAL COSTS FOR PUNCH		
PU ejector Ø 3x6 (in punch)	4092P03	1,31	TiCN coating 96,94
PU ejector Ø 6x10 (in punch)	4092P06	1,31	T-MAX coating 166,55
			A-MAX coating 145,42
			WT-shear 0,00
			DOWT-shear 0,00
			2 PT-shear 31,07
			4 PT-shear 37,29
			Additional keyway 54,69
			Cutting part under 1,00 mm + 40 %

COMPENSATING SHIM FOR PUNCH
Not necessary

SET OF COMPENSATING SHIMS FOR DIE	ADDITIONAL COSTS FOR DIES		
1x0,4 mm/1x0,8 mm/1x1,2 mm	499D2M1	44,61	H-PM [®] Quality 19,14
			Additional keyway 16,17

PASS STANDARD I STATION E

DIAMETER UP TO 114,3 MM



GUIDE ASSEMBLY

Screw M12

Disc springs for sheet thickness up to 6 mm

3 mm length adjustment
by using compensating shims

Keyway position: 0-90°

Surface-hardened and polished punch guide for
sheet thickness up to 6 mm

Clamps to fix the strippers



PUNCH BODY

Thread M12

Punch body made with premium H-PM®



STRIPPER

Interchangeable stripper plate

PASS STANDARD I STATION E

DIAMETER UP TO 114,3 MM

		PART-NO.	PRICE IN €
GUIDE ASSEMBLY			
For all shapes	499E01	1414,10	
PUNCH BODY (H-PM®)			
Round	4022E01	252,24	
Square	4022E02	429,34	
Rectangle	4022E03	429,34	
Oblong	4022E04	429,34	
O.D. Ground Special Shape	4022E0G	454,83	
EDM Required Special Shape	4022E0E	847,21	
STRIPPER			
Round	4032E01	44,61	
Square	4032E02	71,34	
Rectangle	4032E03	71,34	
Oblong	4032E04	71,34	
O.D. Ground Special Shape	4032E0G	76,44	
EDM Required Special Shape	4032E0E	128,69	
DIE (HWS)			
Round	4052E01	179,67	
Square	4052E02	350,37	
Rectangle	4052E03	350,37	
Oblong	4052E04	350,37	
O.D. Ground Special Shape	4052E0G	364,36	
EDM Required Special Shape	4052E0E	448,44	



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH		
PU ejector Ø 3x6 (in punch)	4092P03	1,31	TiCN coating	120,56
PU ejector Ø 6x10 (in punch)	4092P06	1,31	T-MAX coating	206,31
Set clamps with screws	499E71	16,59	A-MAX coating	181,45
Guiding key with screws	499E63	36,97	WT-shear	0,00
			DOWT-shear	0,00
			2 PT-shear	31,07
			4 PT-shear	37,29
			Additional keyway	54,69
			Cutting part under 1,00 mm	+ 40 %
SET OF COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE		
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E3S1	52,26	Additional keyway	146,65
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES		
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E2M1	56,06	H-PM® Quality	24,24
			Additional keyway	16,17

ps:[®]beta-V2[®] ABS I STATION E

DIAMETER UP TO 114,3 MM



GUIDE ASSEMBLY

Screw M12

Disc springs for sheet thickness up to 6 mm

Oil channel for sheet lubrication

10 mm length adjustment in assembled state by pressing the locking button

Keyway position: 0-90°

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Fast and easy clamping system for stripper

Suitable for PDC-system



PUNCH BODY

Thread M12 with oil channel for sheet lubrication

Punch body made with premium H-PM[®]



STRIPPER

Interchangeable stripper plate with oil channels

ps:[®]beta-V2[®] ABS I STATION E

DIAMETER UP TO 114,3 MM

	PART-NO.	PRICE IN €
GUIDE ASSEMBLY		
For all shapes	4039E01	2381,07

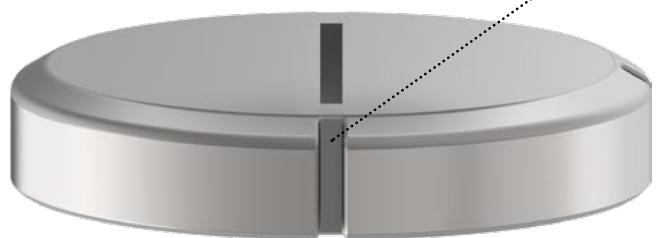
PUNCH BODY (H-PM[®])			
Round	4029E01	279,03	
Square	4029E02	470,12	
Rectangle	4029E03	470,12	
Oblong	4029E04	470,12	
O.D. Ground Special Shape	4029E0G	495,59	
EDM Required Special Shape	4029E0E	886,68	

STRIPPER			
Round	4049E01	138,90	
Square	4049E02	138,90	
Rectangle	4049E03	138,90	
Oblong	4049E04	138,90	
O.D. Ground Special Shape	4049E0G	145,23	
EDM Required Special Shape	4049E0E	151,63	

DIE (HWS)			
Round	4052E01	179,67	
Square	4052E02	350,37	
Rectangle	4052E03	350,37	
Oblong	4052E04	350,37	
O.D. Ground Special Shape	4052E0G	364,36	
EDM Required Special Shape	4052E0E	448,44	



Die with
keyway for PDC-system
+ 16,17 additional costs
Part-No.: „see left“ -2
(e.g.: 4052E04-2)



SPARE PARTS	ADDITIONAL COSTS FOR PUNCH		
PU ejector Ø 3x6 (in punch)	4092P03	1,31	TiCN coating 120,56
PU ejector Ø 6x10 (in punch)	4092P06	1,31	T-MAX coating 206,31
A-MAX coating 181,45			
WT-shear 0,00			
DOWT-shear 0,00			
2 PT-shear 31,07			
4 PT-shear 37,29			
Additional keyway 54,69			
Cutting part under 1,00 mm + 40 %			
COMPENSATING SHIM FOR PUNCH	ADDITIONAL COSTS FOR PUNCH GUIDE		
Not necessary	Additional keyway 146,65		
SET OF COMPENSATING SHIMS FOR DIE	ADDITIONAL COSTS FOR DIES		
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E2M1	56,06	H-PM [®] Quality 24,24
			Additional keyway 16,17

ps:[®]beta-V2[®] ABS SLITTING TOOL I STATION E



GUIDE ASSEMBLY

Screw M12

Disc springs for sheet thickness up to 6 mm

Oil channel for sheet lubrication

10 mm length adjustment in assembled state by pressing the locking button

Keyway position: 0-90°

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Fast and easy clamping system for stripper

Suitable for PDC-system



SLITTING PUNCH HOLDER

4 fixing threads M6

Thread M12 with oil channel for sheet lubrication

SLITTING PUNCH

Punch body made with premium H-PM[®]



STRIPPER

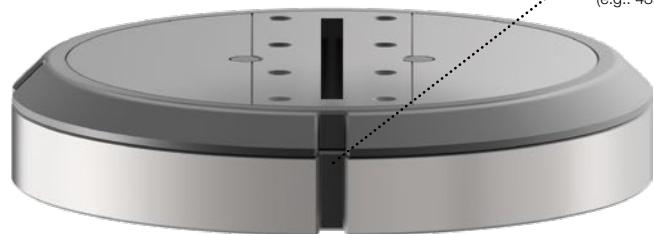
Interchangeable stripper plate with oil channels

ps:[®]beta-V2[®] ABS SLITTING TOOL I STATION E

	PART-NO.	PRICE IN €		
GUIDE ASSEMBLY				
For all shapes	4039E01	2381,07		
SLITTING PUNCH HOLDER				
For all shapes	4229ET00	415,31		
SLITTING PUNCH (MAX. 6,35X111) / (H-PM[®])				
Rectangle	4029ET03	214,03		
Oblong	4029ET04	214,03		
Trapezoid G09	4029ET0G	228,07		
Double Trapezoid E03	4029ET0E	361,79		
STRIPPER				
Rectangle	4049ET03	138,90		
Oblong	4049ET04	138,90		
Trapezoid G09	4049ET0G	145,23		
Double Trapezoid E03	4049ET0E	151,63		
REVERSIBLE PLATE HOLDER				
	4399ET00	620,46		
REVERSIBLE PLATE (H-PM[®])				
Rectangle	4052ET03	174,56		
Oblong	4052ET04	174,56		
Trapezoid G09	4052ET0G	180,91		
Double Trapezoid E03	4052ET0E	207,68		
SPARE PARTS				
PU ejector Ø 3x6 (in punch)				
4092P03	1,31	TiCN coating	98,19	
PU ejector Ø 6x10 (in punch)				
4092P06	1,31	T-MAX coating	171,51	
		A-MAX coating	147,91	
		WT-shear	0,00	
		DOWT-shear	0,00	
		2 PT-shear	31,07	
		4 PT-shear	37,29	
		Additional keyway	54,69	
		Cutting part under 1,00 mm	+ 40 %	
SET OF COMPENSATING SHIMS FOR SLITTING PUNCH HOLDER				
Not necessary		Additional keyway	146,65	
SET OF COMPENSATING SHIMS FOR REVERSIBLE PLATE				
1x0,4 mm/1x0,8 mm/1x1,2 mm	499ET60	87,93	Additional keyway	16,17



Die with
keyway for PDC-system
+ 16,17 additional costs
Part-No.: „see left“ -2
(e.g.: 4399ET00-2)



ps:®beta-V2® ABS SLITTING TOOL | STATION E CLOSE TO CLAMP



GUIDE ASSEMBLY

Screw M12

Disc springs for sheet thickness up to 6 mm

Oil channel for sheet lubrication

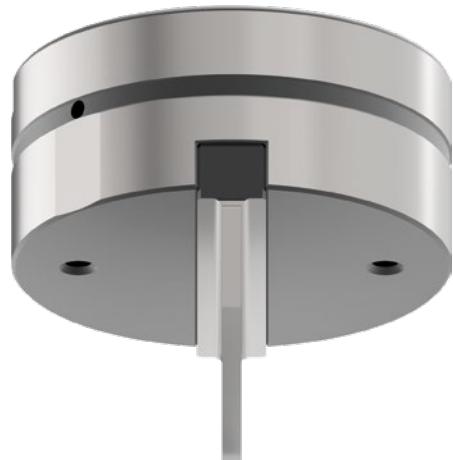
10 mm length adjustment in assembled state by pressing the locking button

Keyway position: 0-90°

Surface-hardened and polished punch guide for sheet thickness up to 6 mm

Fast and easy clamping system for stripper

Suitable for PDC-system



SLITTING PUNCH HOLDER

4 fixing threads M6

Thread M12 with oil channel for sheet lubrication

SLITTING PUNCH

Punch body made with premium H-PM®



STRIPPER

Interchangeable stripper plate

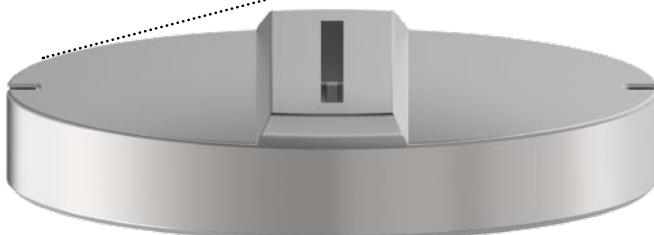
One or two-sided relief for punching close to clamp

ps:[®]beta-V2[®] ABS SLITTING TOOL | STATION E CLOSE TO CLAMP

	PART-NO.	PRICE IN €
GUIDE ASSEMBLY		
For all shapes	4039ETP01	2648,59
SLITTING PUNCH HOLDER		
For all shapes	4229ET00	415,31
SLITTING PUNCH (MAX. 6,35X111) / (H-PM[®])		
Rectangle	4029ET03	214,03
Oblong	4029ET04	214,03
Trapezoid G09	4029ET0G	228,07
Double Trapezoid E03	4029ET0E	361,79
STRIPPER ONE-SIDED FREE		
Rectangle	4049ETP03-1	347,84
Oblong	4049ETP04-1	347,84
Trapezoid G09	4049ETP0G-1	354,15
Double Trapezoid E03	4049ETP0E-1	360,56
STRIPPER TWO-SIDED FREE		
Rectangle	4049ETP03-2	347,84
Oblong	4049ETP04-2	347,84
Trapezoid G09	4049ETP0G-2	354,15
Double Trapezoid E03	4049ETP0E-2	360,56
DIE ONE-SIDED FREE (HWS)		
Rectangle	4052ETP03-1	475,21
Oblong	4052ETP04-1	475,21
Trapezoid G09	4052ETP0G-1	522,32
Double Trapezoid E03	4052ETP0E-1	575,83
DIE TWO-SIDED FREE (HWS)		
Rectangle	4052ETP03-2	475,21
Oblong	4052ETP04-2	475,21
Trapezoid G09	4052ETP0G-2	522,32
Double Trapezoid E03	4052ETP0E-2	575,83
SPARE PARTS		
PU ejector Ø 3x6 (in punch)		
4092P03	1,31	TiCN coating
4092P06	1,31	T-MAX coating
		A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
		Cutting part under 1,00 mm
		+ 40 %
COMPENSATING SHIM FOR SLITTING PUNCH HOLDER		
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E2M1	56,06
		H-PM [®] Quality
		Additional keyway



Die with
keyway for PDC-system
+ 16,17 additional costs
Part-No.: „see left“ -2
(e.g.: 4052ETP04-2-2)



ps:[®]alpha-V2 ABS I STATION E

DIAMETER UP TO 114,3 MM



GUIDE ASSEMBLY

Screw M14

Disc springs for sheet thickness up to 6 mm

Oil channel for sheet lubrication

10 mm length adjustment in assembled state by pressing the locking button

Keyway position: 0-90°

Surface-hardened and polished punch guide
for sheet thickness up to 6 mm

Suitable for PDC-system



PUNCH BODY

Thread M14 with oil channel for sheet lubrication

Punch body made with premium H-PM[®]



STRIPPER

Interchangeable stripper plate with oil channels

ps:[®]alpha-V2 ABS I STATION E

DIAMETER UP TO 114,3 MM

	PART-NO.	PRICE IN €
GUIDE ASSEMBLY		
For all shapes	4031E01	2381,07

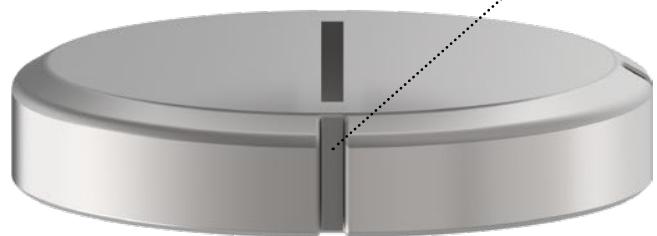
PUNCH BODY (H-PM[®])			
Round	4021E01	279,03	
Square	4021E02	470,12	
Rectangle	4021E03	470,12	
Oblong	4021E04	470,12	
O.D. Ground Special Shape	4021E0G	495,59	
EDM Required Special Shape	4021E0E	886,68	

STRIPPER			
Round	4041E01	138,90	
Square	4041E02	138,90	
Rectangle	4041E03	138,90	
Oblong	4041E04	138,90	
O.D. Ground Special Shape	4041E0G	145,23	
EDM Required Special Shape	4041E0E	151,63	

DIE (HWS)			
Round	4052E01	179,67	
Square	4052E02	350,37	
Rectangle	4052E03	350,37	
Oblong	4052E04	350,37	
O.D. Ground Special Shape	4052E0G	364,36	
EDM Required Special Shape	4052E0E	448,44	



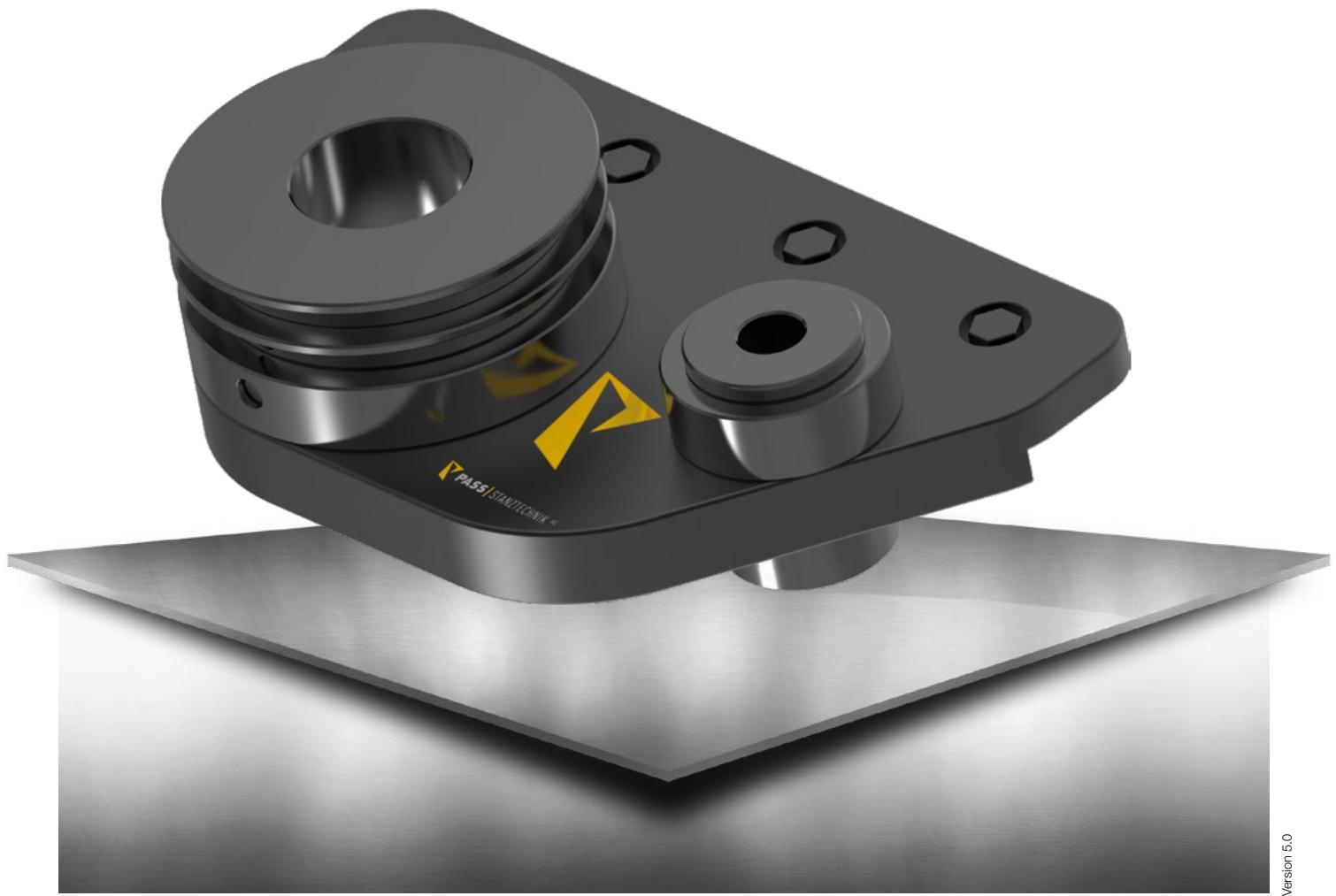
Die with
keyway for PDC-system
+ 16,17 additional costs
Part-No.: „see left“ -2
(e.g.: 4052E04-2)



SPARE PARTS	ADDITIONAL COSTS FOR PUNCH			
PU ejector Ø 3x6 (in punch)	4092P03	1,31	TiCN coating	120,56
PU ejector Ø 6x10 (in punch)	4092P06	1,31	T-MAX coating	206,31
			A-MAX coating	181,45
			WT-shear	0,00
			DOWT-shear	0,00
			2 PT-shear	31,07
			4 PT-shear	37,29
			Additional keyway	54,69
			Cutting part under 1,00 mm	+ 40 %

COMPENSATING SHIM FOR PUNCH	ADDITIONAL COSTS FOR DIES			
Not necessary	1x0,4 mm/1x0,8 mm/1x1,2 mm	499E2M1	56,06	H-PM [®] Quality
				Additional keyway

SET OF COMPENSATING SHIMS FOR DIE	ADDITIONAL COSTS FOR DIES			
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E2M1	56,06	H-PM [®] Quality	24,24
			Additional keyway	16,17



ACCESSORIES

PASS ACCESSORIES FOR YOUR
AMADA SYSTEM

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ps:®assembly-element

STATION A



STATION B



STATION C



STATION D



STATION E



SOCKET SET INCL. BASE PLATE

Set consists of: 5 sockets (Stat. A-E) +
1 base plate

499M18000

789,86

PART-NO.

PRICE IN €



EQUIPPED BASE PLATE

PASS ASSEMBLING SET

FOR PASS GUIDE ASSEMBLY STAT. C, D, E

PART-NO.	PRICE IN €
COMPLETE ASSEMBLING SET	
Torque wrench / 25-130 Nm	
incl. 4 socket wrench SW 8 / SW10 / SW 12 / SW 14	
Multipurpose grease 400 gr.	
Triangular whetstone	
Diamond needle file with quick-acting clamp	
Total price	499MONKIT
	667,55



PASS ADAPTER

PUNCH ADAPTER

Surface-hardened and polished



PASS ADAPTER	STATION	PART-NO.	PRICE IN €
Punch adapter	B/A	401BAS1	258,39
Die adapter ⁽³⁾	B/A	401BAM1	187,29
Punch adapter	C/B	401CBS1	408,79
Die adapter ⁽¹⁾⁽³⁾	C/B	401CBM1	251,56
Punch adapter	D/A	401DAS1	762,88
Die adapter ⁽³⁾	D/A	401DAM1	470,31
Punch adapter	D/B	401DBS1	762,88
Die adapter ⁽³⁾	D/B	401DBM1	470,31
Punch adapter	D/C	401DCS1	762,88
Die adapter ⁽¹⁾⁽²⁾⁽³⁾	D/C	401DCM1	470,31

⁽¹⁾ max. stamping and punching force: 70kn

⁽²⁾ assembled die is 2 mm above table level

⁽³⁾ height h = 26 mm

DIE ADAPTER

Surface-hardened and polished

2 clamping screws



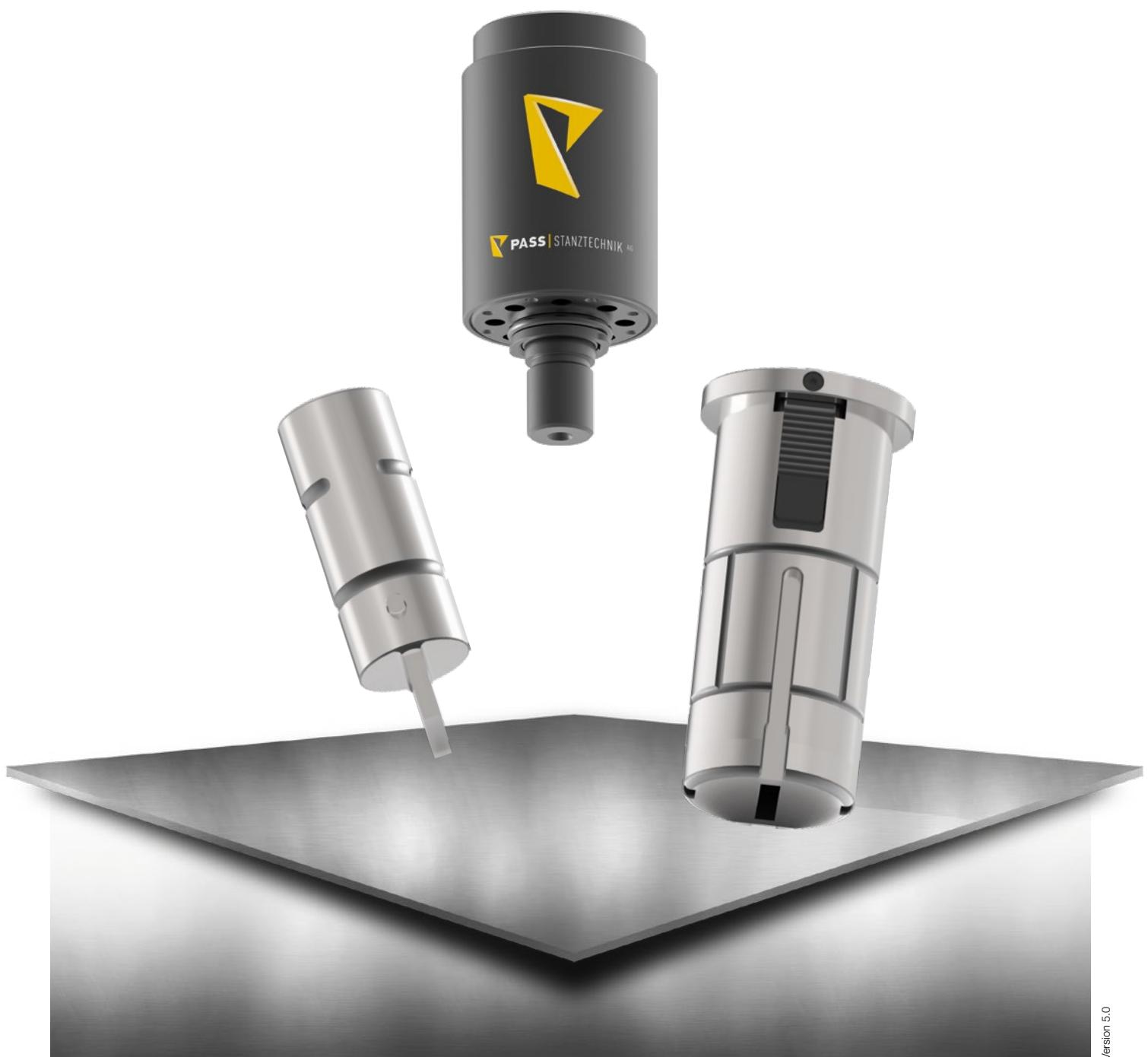
PASS DIES WITH BRUSH INSERTS

	STATION	PART-NO.	PRICE IN €
PASS DIES WITH BRUSH INSERTS			
1x Ø13	A	441711A01	36,97
3x Ø13	B	441711B01	54,81
7x Ø13	C	441711C01	109,56
19x Ø13	D	441711D01	164,38
35x Ø13	E	441711E01	272,64



SPARE PARTS

Brush inserts Ø 13 mm (piece) 200B00 2,05



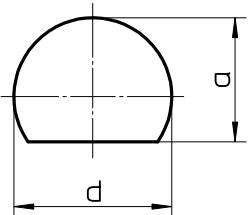
TECHNICAL INFORMATION

INFORMATION ABOUT OUR TOOLS FOR YOUR AMADA SYSTEM

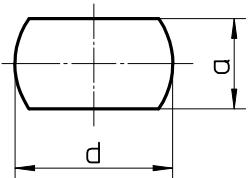
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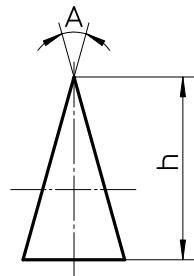
O.D. GROUND SPECIAL SHAPES



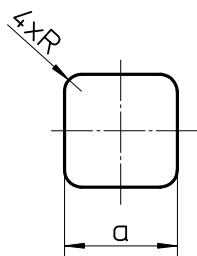
G01



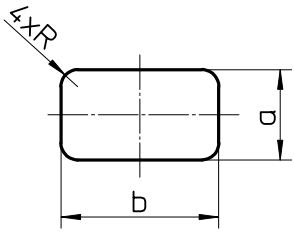
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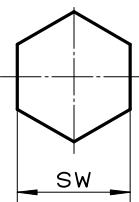
G03



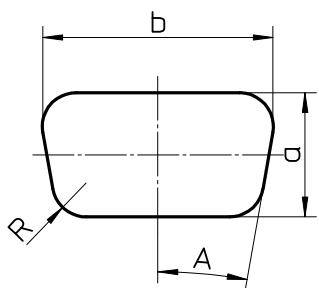
G04



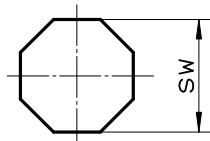
G05



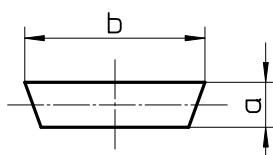
G06



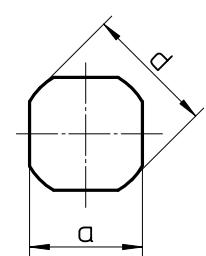
G07



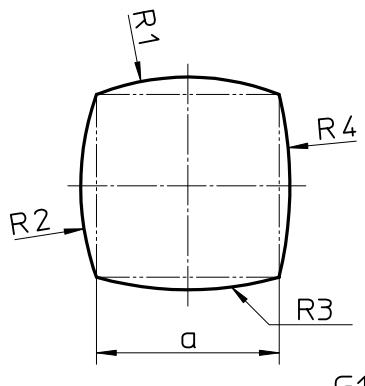
G08



G09

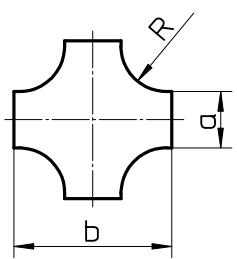


G10

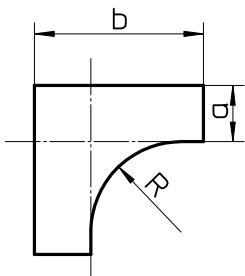


G11

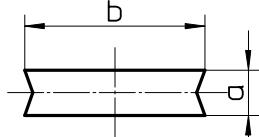
EDM REQUIRED SPECIAL SHAPES



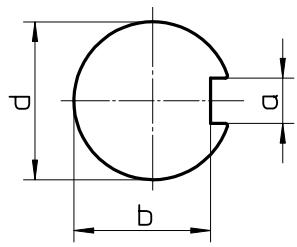
E01



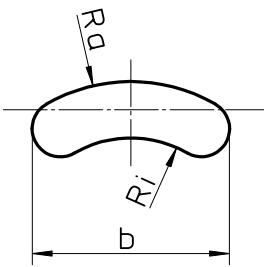
E02



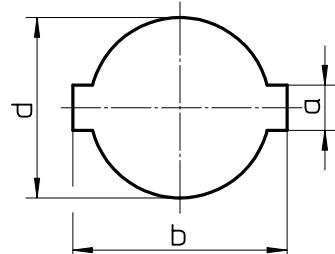
E03



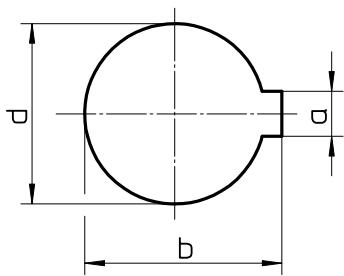
E04



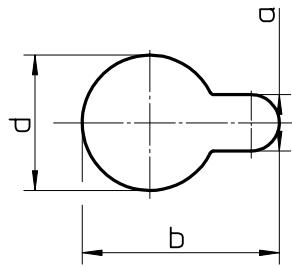
E05



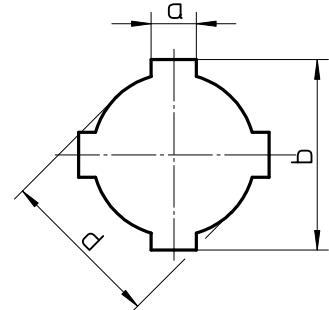
E06



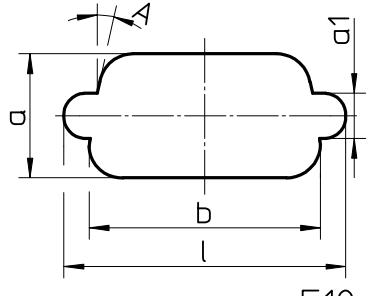
E07



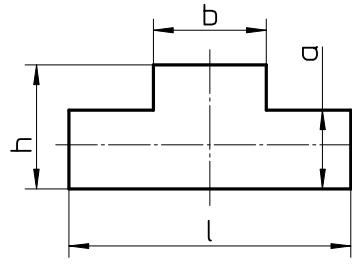
E08



E09



E10



E11

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 unformed 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 with the best possible performance characteristics for dies in the punching technology caused by best possible degree of purity.

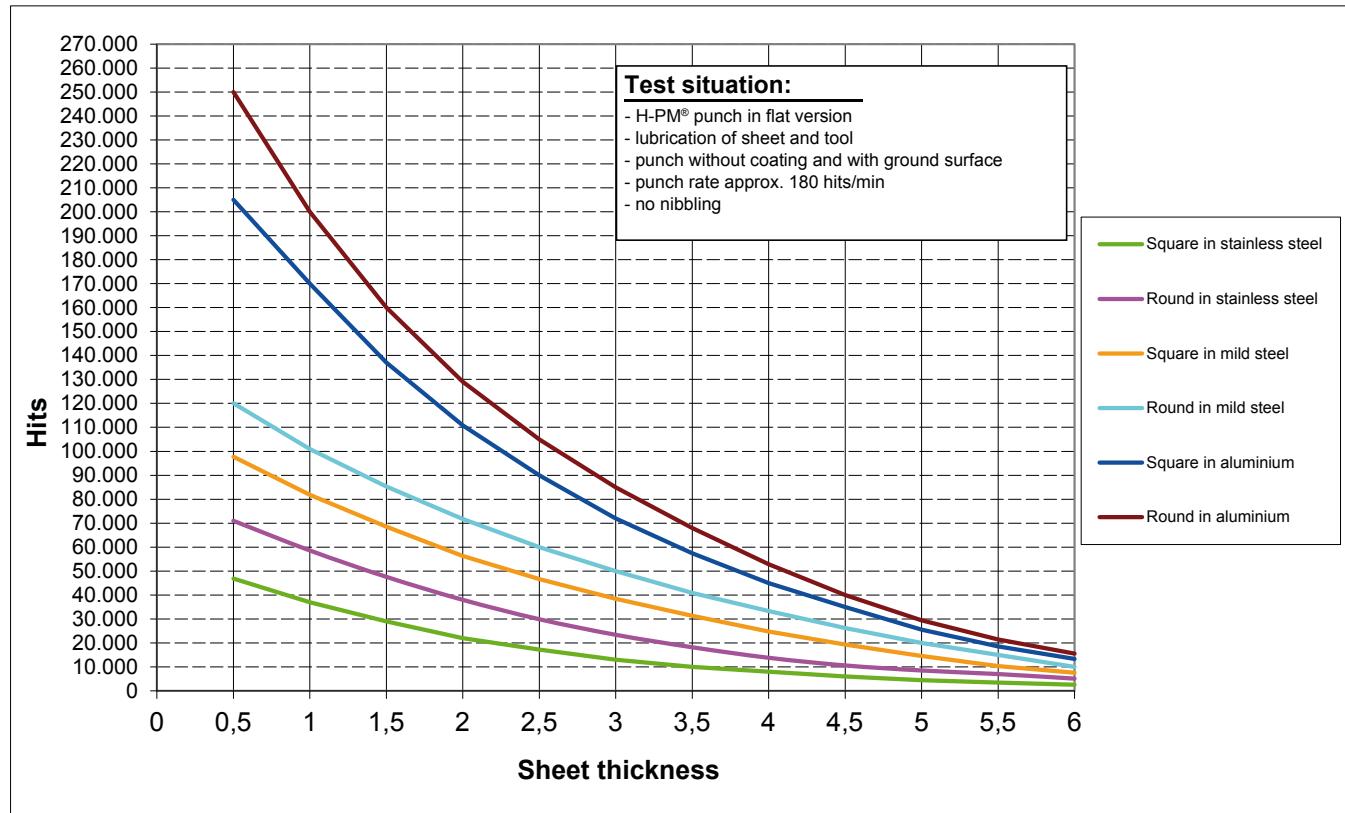
The high ductility of the segregational uniformed microstructure guarantees best possible fatigue limit. This kind of steel is especially suitable for dies with risk-breakage in regard to special shapes.

Advantage for customer:

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

LIFETIME OF TOOLS I 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 fulfil 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 / zinco

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 (STANDARD)



PASS dies for tooling system AMADA are produced in standard version with a slug-stop version (without additional costs).

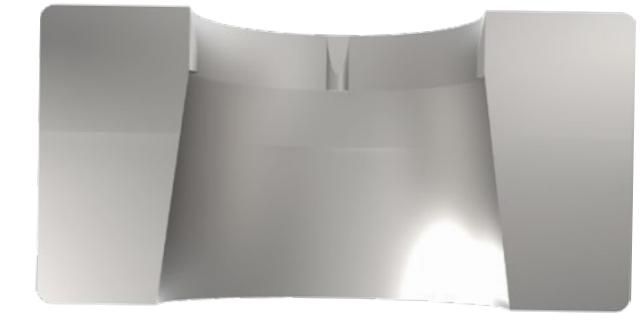
This means that the upper part of the cutting part is produced with a negative angle.

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.

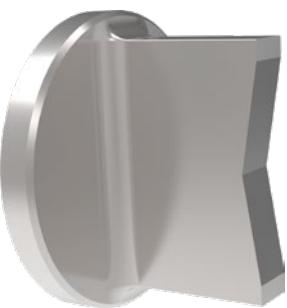
PUNCHES WITH DIFFERENT SHEAR TYPES



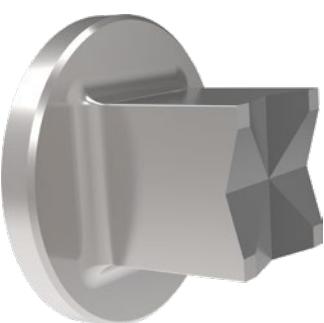
WT



DOWT



2 PT



4 PT

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

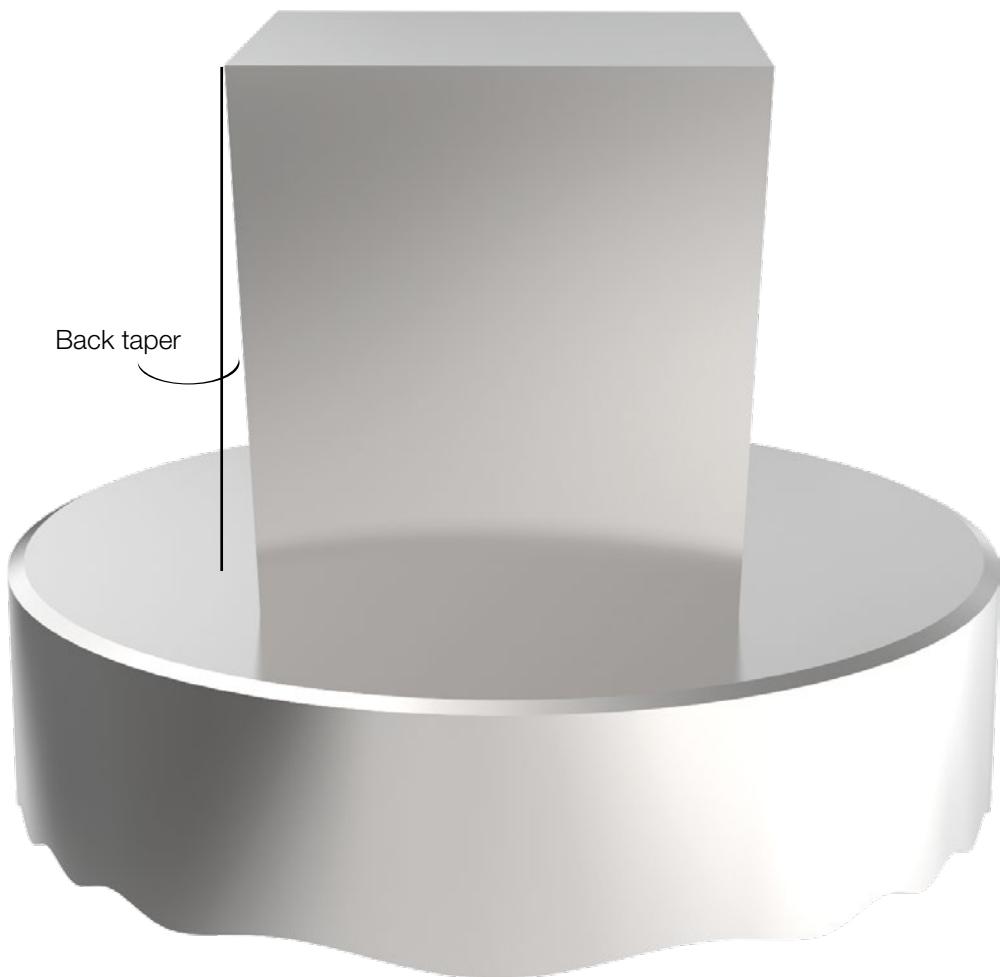
Disadvantages only reasonable for big shapes
difficult to regrind

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.

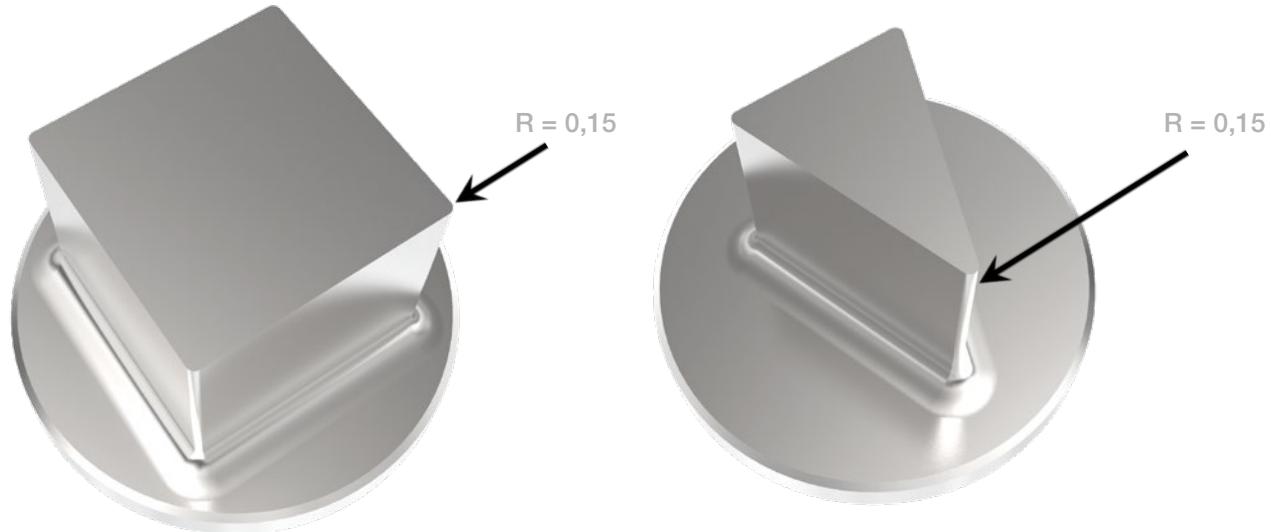
We recommend a line polished version for cutting parts, which have to be produced sink-eroded (special shape with internal shape, e.g. cross-form, U-form, etc.) and in high quality sheets.



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.

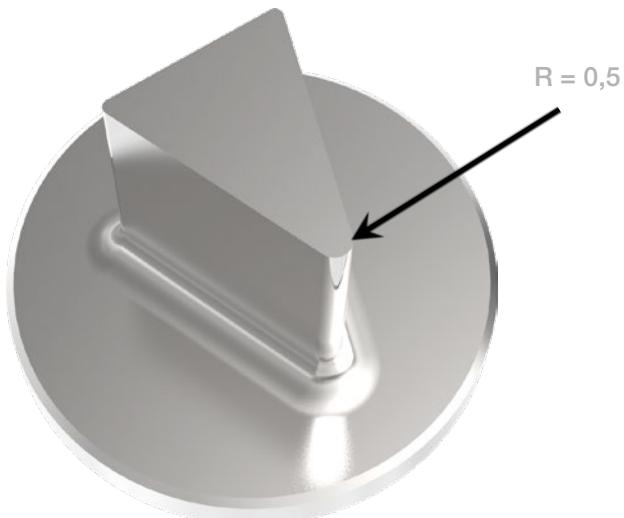
E.g.: square and triangle punch



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.



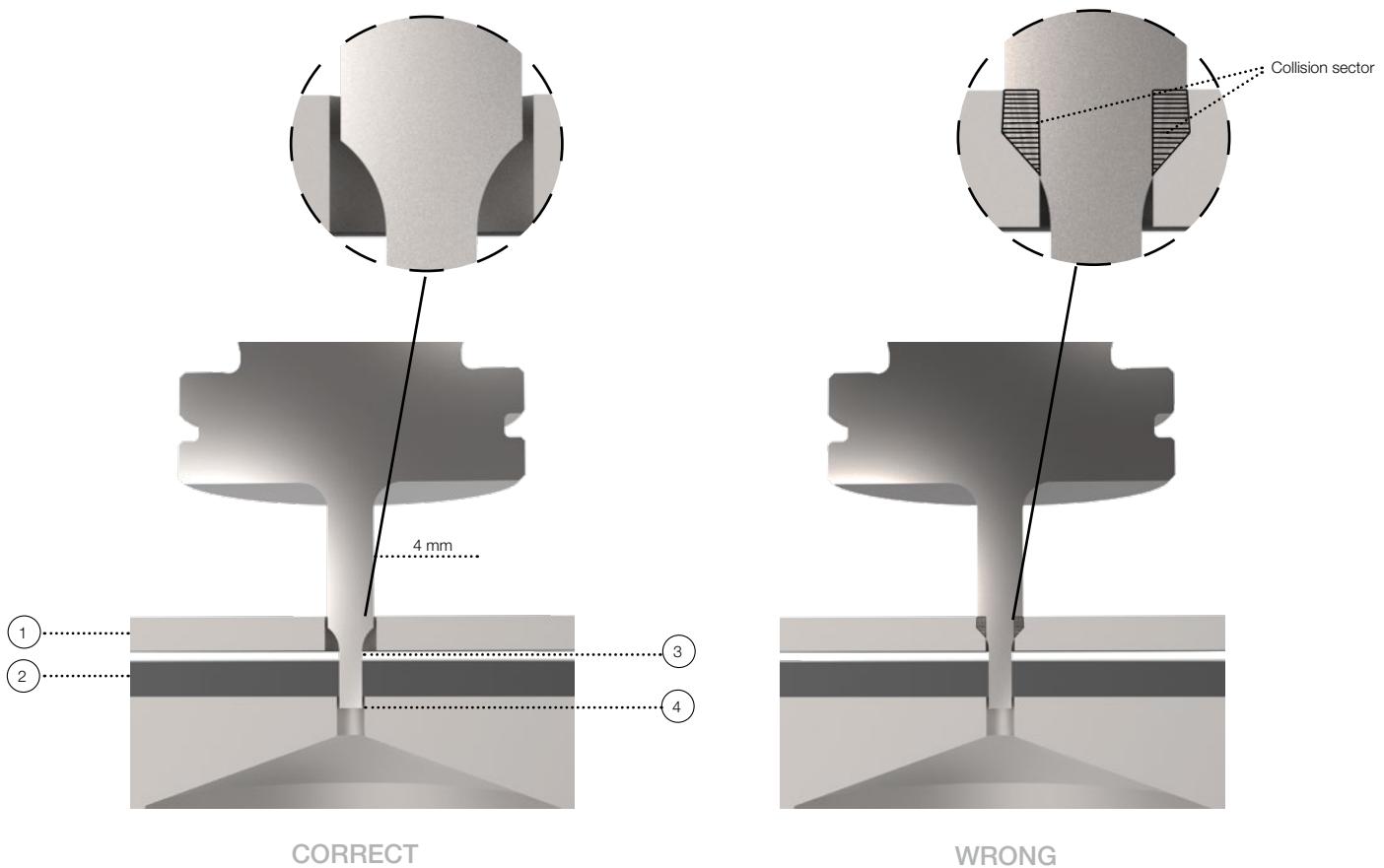
PASS PUNCHES WITH REINFORCED SHOULDER

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

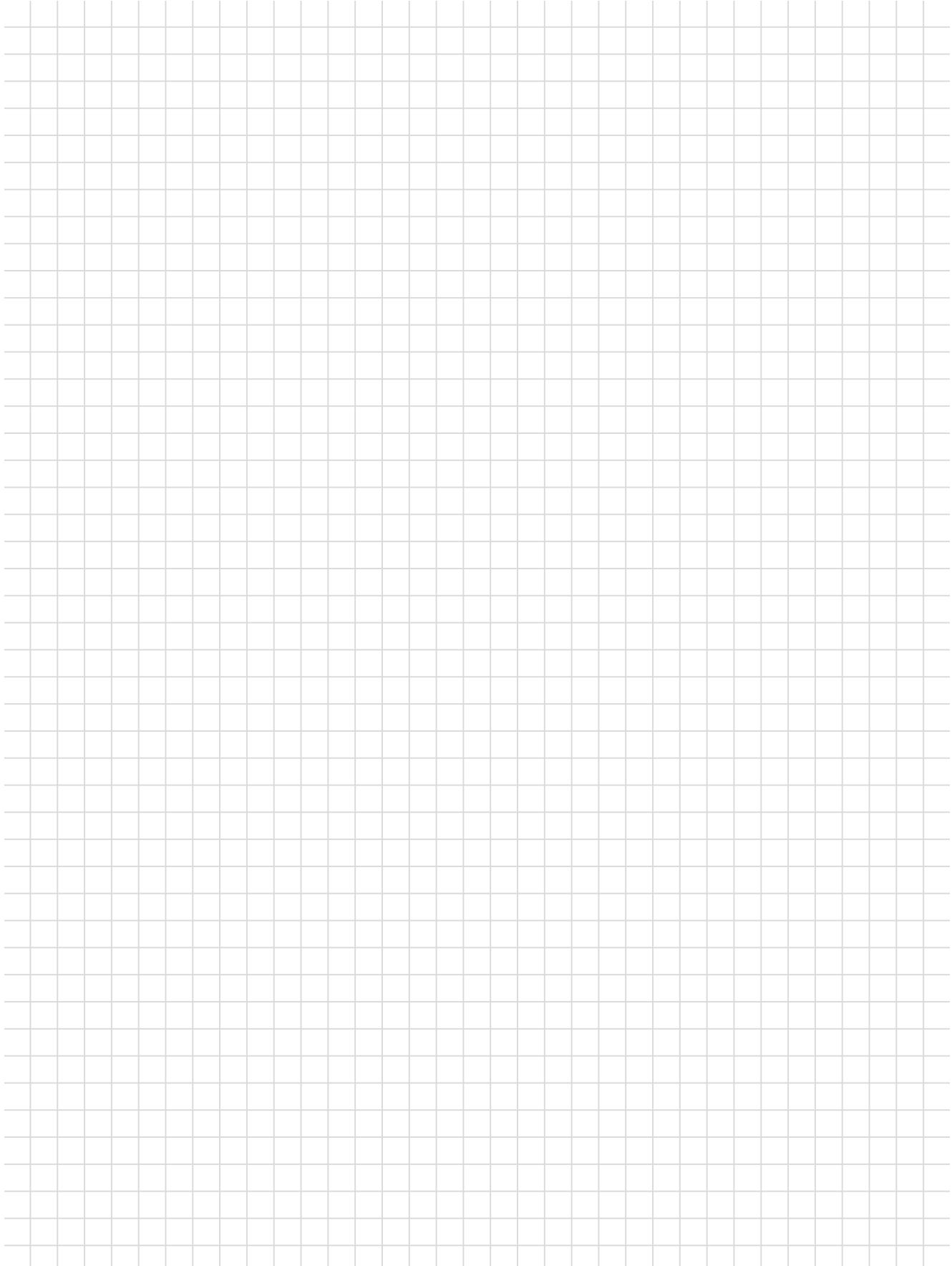
This guarantees that you will get a tool with highest stability in order to punch also thicker and high-strength sheets.

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

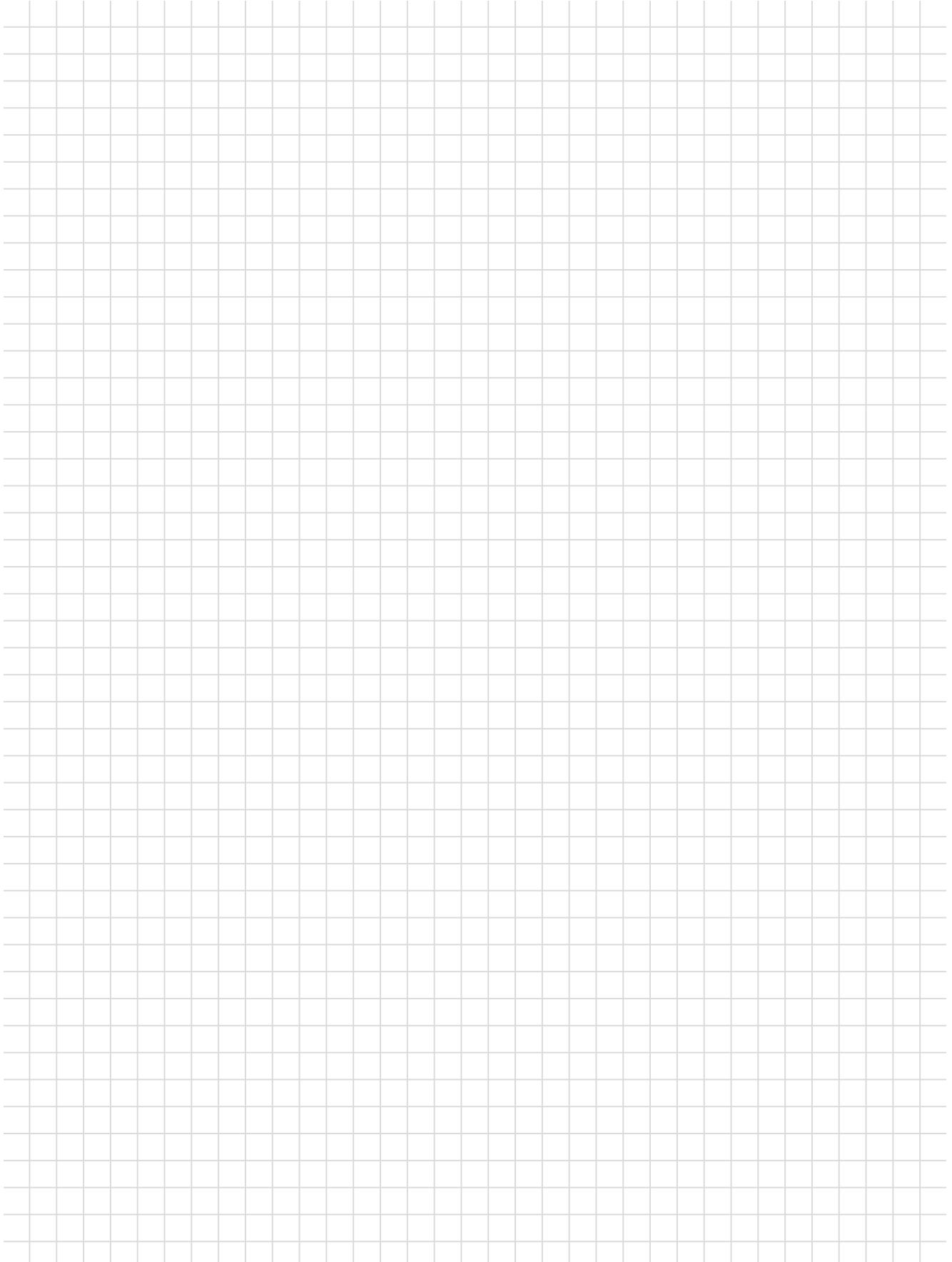
It might be possible that it gets necessary to use a stripper with an appropriate big shape (width min. 4,5 mm) in order to get sure that the reinforced punch shoulder can immerse into the stripper.



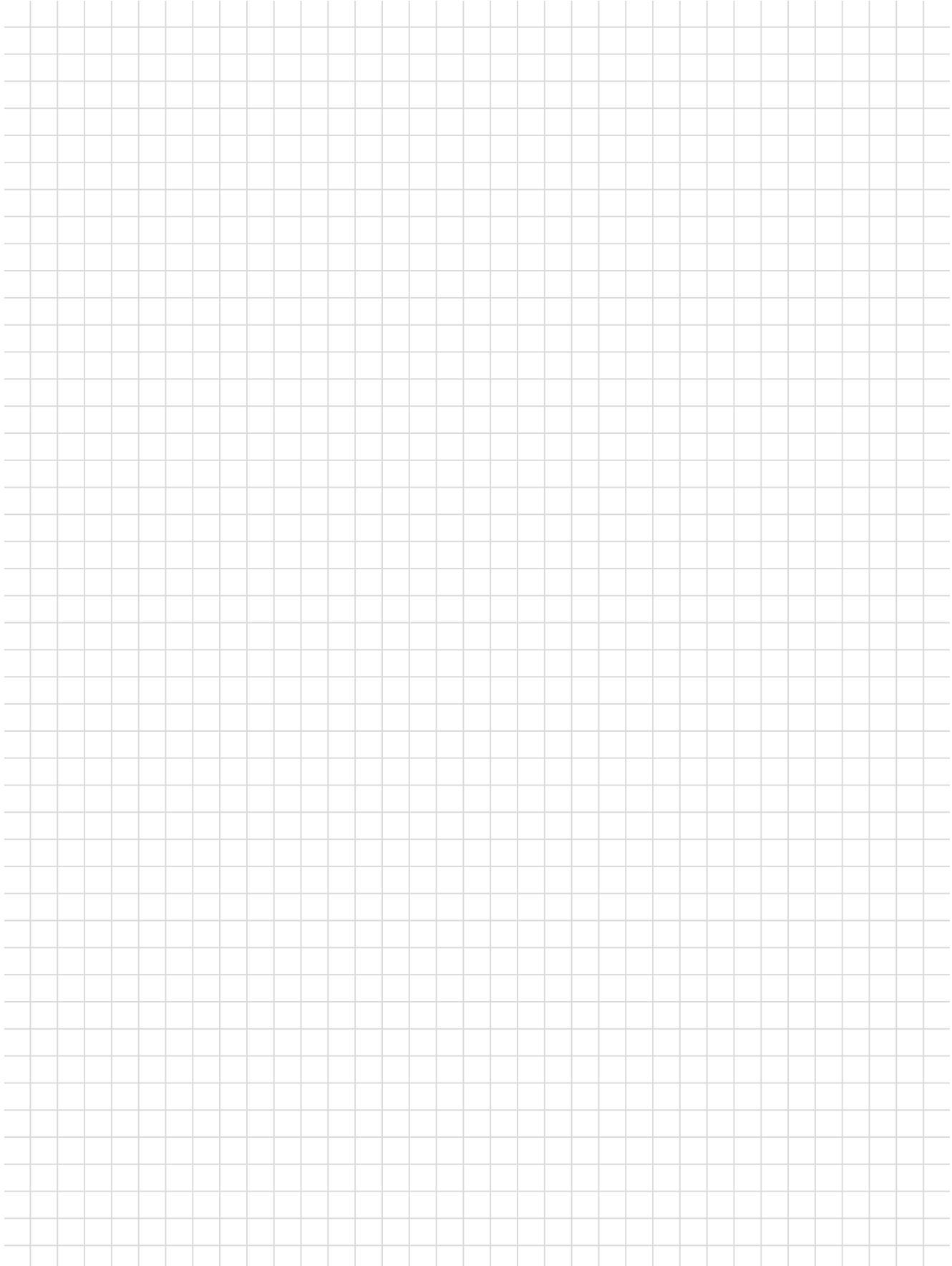
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NOTES



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Am Steinkreuz 2
95473 Creußen | Germany

WEB: www.pass-ag.com
MAIL: info@pass-ag.com

FON: +49 (0) 92 70 / 9 85 - 0
FAX: +49 (0) 92 70 / 9 85 - 99