



CATALOG 08/2019-WW-A.1

SYSTEM THICK TURRET



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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TOOLS STATION A TO E

PASS TOOLS FOR YOUR THICK TURRET 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:

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.

COMPLETE PUNCH ASSEMBLY

Round	4012A01
Square	4012A02
Rectangle	4012A03
Oblong	4012A04
O.D. Ground Special Shape	4012A0G
EDM Required Special Shape	4012A0E

HEAD UNIT (HEAD SCREW, SPRING, DISTANCE RING)

For all shapes	4092A01
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PUNCH BODY (H-PM®)

Round	4022A01
Square	4022A02
Rectangle	4022A03
Oblong	4022A04
O.D. Ground Special Shape	4022A0G
EDM Required Special Shape	4022A0E

PUNCH GUIDE

Round	4032A01
Square	4032A02
Rectangle	4032A03
Oblong	4032A04
O.D. Ground Special Shape	4032A0G
EDM Required Special Shape	4032A0E

DIE (HWS)

Round	4052A01
Square	4052A02
Rectangle	4052A03
Oblong	4052A04
O.D. Ground Special Shape	4052A0G
EDM Required Special Shape	4052A0E



SPARE PARTS

Head screw	4092A31
Spring	4092A11
Distance ring	4092A21
O-Ring (in punch guide)	4092A51
PU ejector Ø 3x6 (in punch)	4092P03
PU ejector Ø 6x10 (in punch)	4092P06

ADDITIONAL COSTS FOR PUNCH

TICN coating
T-MAX coating
A-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear
Cutting part under 1,00 mm

COMPENSATING SHIM FOR PUNCH

Piece (2 mm)	499A4S2
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ADDITIONAL COSTS FOR PUNCH GUIDE

Additional keyway

SET OF COMPENSATING SHIMS FOR DIE

1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1
Shimkeeper (0,5 mm)	499A1M95

ADDITIONAL COSTS FOR DIES

Reinforced die
H-PM® Quality
Additional pin hole

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:
All shapes: 0-90°

STRIPPER

Interchangeable stripper plate

ps:® alpha I STATION A

DIAMETER UP TO 12,7 MM

PART-NO.

COMPLETE PUNCH ASSEMBLY		
	Round	4013A01
	Square	4013A02
	Rectangle	4013A03
	Oblong	4013A04
	O.D. Ground Special Shape	4013A0G
	EDM Required Special Shape	4013A0E

HEAD UNIT		
	For all shapes	4093A01

PUNCH BODY (H-PM®)		
	Round	4023A01
	Square	4023A02
	Rectangle	4023A03
	Oblong	4023A04
	O.D. Ground Special Shape	4023A0G
	EDM Required Special Shape	4023A0E

PUNCH GUIDE		
	For all shapes	4033A05

STRIPPER		
	Round	4043A01
	Square	4043A02
	Rectangle	4043A03
	Oblong	4043A04
	O.D. Ground Special Shape	4043A0G
	EDM Required Special Shape	4043A0E

DIE (HWS)		
	Round	4052A01
	Square	4052A02
	Rectangle	4052A03
	Oblong	4052A04
	O.D. Ground Special Shape	4052A0G
	EDM Required Special Shape	4052A0E

SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
O-Ring (in punch guide)	4092A51	TICN coating
PU ejector Ø 3x6 (in punch)	4092P03	T-MAX coating
PU ejector Ø 6x10 (in punch)	4092P06	A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway

SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	Reinforced die
Shimkeeper (0,5 mm)	499A1M95	H-PM® Quality
		Additional pin hole



ps:®alpha-compact 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:

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.

COMPLETE PUNCH ASSEMBLY		
	Round	4017A01
	Square	4017A02
	Rectangle	4017A03
	Oblong	4017A04
	O.D. Ground Special Shape	4017A0G
	EDM Required Special Shape	4017A0E

HEAD UNIT		
	For all shapes	4093A01

PUNCH BODY (H-PM®)		
	Round	4023A01
	Square	4023A02
	Rectangle	4023A03
	Oblong	4023A04
	O.D. Ground Special Shape	4023A0G
	EDM Required Special Shape	4023A0E

PUNCH GUIDE		
	Round	4032A01
	Square	4032A02
	Rectangle	4032A03
	Oblong	4032A04
	O.D. Ground Special Shape	4032A0G
	EDM Required Special Shape	4032A0E

DIE (HWS)		
	Round	4052A01
	Square	4052A02
	Rectangle	4052A03
	Oblong	4052A04
	O.D. Ground Special Shape	4052A0G
	EDM Required Special Shape	4052A0E

SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
O-Ring (in punch guide)	4092A51	TICN coating
PU ejector Ø 3x6 (in punch)	4092P03	T-MAX coating
PU ejector Ø 6x10 (in punch)	4092P06	A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway

SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	Reinforced die
Shimkeeper (0,5 mm)	499A1M95	H-PM® Quality
		Additional pin hole



ps:®beta-V2® | 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



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:

All shapes: 0-90-225°

STRIPPER

Interchangeable stripper plate

ps:®beta-V2® | STATION A

DIAMETER UP TO 12,7 MM

PART-NO.

COMPLETE PUNCH ASSEMBLY		
	Round	4010A01
	Square	4010A02
	Rectangle	4010A03
	Oblong	4010A04
	O.D. Ground Special Shape	4010A0G
	EDM Required Special Shape	4010A0E

HEAD UNIT		
	For all shapes	4090A10

PUNCH BODY (H-PM®)		
	Round	4020A01
	Square	4020A02
	Rectangle	4020A03
	Oblong	4020A04
	O.D. Ground Special Shape	4020A0G
	EDM Required Special Shape	4020A0E

PUNCH GUIDE		
	For all shapes	4030A05

STRIPPER		
	Round	4040A01
	Square	4040A02
	Rectangle	4040A03
	Oblong	4040A04
	O.D. Ground Special Shape	4040A0G
	EDM Required Special Shape	4040A0E

DIE (HWS)		
	Round	4052A01
	Square	4052A02
	Rectangle	4052A03
	Oblong	4052A04
	O.D. Ground Special Shape	4052A0G
	EDM Required Special Shape	4052A0E

SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
O-Ring (in punch guide)	4092A51	TiCN coating
PU ejector Ø 3x6 (in punch)	4092P03	T-MAX coating
PU ejector Ø 6x10 (in punch)	4092P06	A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway

SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	Reinforced die
Shimkeeper (0,5 mm)	499A1M95	H-PM® Quality
		Additional pin hole



ps:®beta-compact 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



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:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-90-225°

Asym. shapes: 0-90-180-270°

Tool shapes integrated in guide

ps:®beta-compact I STATION A

DIAMETER UP TO 12,7 MM

PART NO.

COMPLETE PUNCH ASSEMBLY

Round	4016A01
Square	4016A02
Rectangle	4016A03
Oblong	4016A04
O.D. Ground Special Shape	4016A0G
EDM Required Special Shape	4016A0E

HEAD UNIT

For all shapes	4094A10
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PUNCH BODY (H-PM®)

Round	4024A01
Square	4024A02
Rectangle	4024A03
Oblong	4024A04
O.D. Ground Special Shape	4024A0G
EDM Required Special Shape	4024A0E

PUNCH GUIDE

Round	4036A01
Square	4036A02
Rectangle	4036A03
Oblong	4036A04
O.D. Ground Special Shape	4036A0G
EDM Required Special Shape	4036A0E

DIE (HWS)

Round	4052A01
Square	4052A02
Rectangle	4052A03
Oblong	4052A04
O.D. Ground Special Shape	4052A0G
EDM Required Special Shape	4052A0E



SPARE PARTS

O-Ring (in punch guide)	4092A51
PU ejector Ø 3x6 (in punch)	4092P03
PU ejector Ø 6x10 (in punch)	4092P06

ADDITIONAL COSTS FOR PUNCH

TICN coating
T-MAX coating
A-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear
Cutting part under 1,00 mm

COMPENSATING SHIM FOR PUNCH

Not necessary

ADDITIONAL COSTS FOR PUNCH GUIDE

Additional keyway

SET OF COMPENSATING SHIMS FOR DIE

1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1
Shimkeeper (0,5 mm)	499A1M95

ADDITIONAL COSTS FOR DIES

Reinforced die
H-PM® Quality
Additional pin hole

PASS STANDARD I STATION B

DIAMETER UP TO 31,7 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 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:

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 31,7 MM

		PART NO.
COMPLETE PUNCH ASSEMBLY		
	Round	4012B01
	Square	4012B02
	Rectangle	4012B03
	Oblong	4012B04
	O.D. Ground Special Shape	4012B0G
	EDM Required Special Shape	4012B0E
HEAD UNIT (HEAD SCREW, SPRING, DISTANCE RING)		
	For all shapes	4092B01
PUNCH BODY (H-PM®)		
	Round	4022B01
	Square	4022B02
	Rectangle	4022B03
	Oblong	4022B04
	O.D. Ground Special Shape	4022B0G
	EDM Required Special Shape	4022B0E
PUNCH GUIDE		
	Round	4032B01
	Square	4032B02
	Rectangle	4032B03
	Oblong	4032B04
	O.D. Ground Special Shape	4032B0G
	EDM Required Special Shape	4032B0E
DIE (HWS)		
	Round	4052B01
	Square	4052B02
	Rectangle	4052B03
	Oblong	4052B04
	O.D. Ground Special Shape	4052B0G
	EDM Required Special Shape	4052B0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
Head screw	4092B31	TICN coating
Spring	4092B11	T-MAX coating
Distance ring	4092B21	A-MAX coating
O-Ring (in punch guide)	4092B51	WT-shear
PU ejector Ø 3x6 (in punch)	4092P03	DOWT-shear
PU ejector Ø 6x10 (in punch)	4092P06	2 PT-shear
		4 PT-shear
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Piece (2 mm)	499B4S2	Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	Reinforced die
Shimkeeper (0,5 mm)	499B1M95	H-PM® Quality
		Additional pin hole

ps:®alpha I STATION B

DIAMETER UP TO 31,7 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:

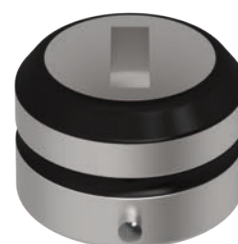
All shapes: 0-45-90-180-270°

STRIPPER

Interchangeable stripper plate

ps:® alpha I STATION B

DIAMETER UP TO 31,7 MM



PART-NO.

COMPLETE PUNCH ASSEMBLY

Round	4013B01
Square	4013B02
Rectangle	4013B03
Oblong	4013B04
O.D. Ground Special Shape	4013B0G
EDM Required Special Shape	4013B0E

HEAD UNIT

For all shapes	4093B01
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PUNCH BODY (H-PM®)

Round	4023B01
Square	4023B02
Rectangle	4023B03
Oblong	4023B04
O.D. Ground Special Shape	4023B0G
EDM Required Special Shape	4023B0E

PUNCH GUIDE

For all shapes	4033B05
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STRIPPER

Round	4043B01
Square	4043B02
Rectangle	4043B03
Oblong	4043B04
O.D. Ground Special Shape	4043B0G
EDM Required Special Shape	4043B0E

DIE (HWS)

Round	4052B01
Square	4052B02
Rectangle	4052B03
Oblong	4052B04
O.D. Ground Special Shape	4052B0G
EDM Required Special Shape	4052B0E

SPARE PARTS

O-Ring (in punch guide)	4092B51
PU ejector Ø 3x6 (in punch)	4092P03
PU ejector Ø 6x10 (in punch)	4092P06

ADDITIONAL COSTS FOR PUNCH

TICN coating
T-MAX coating
A-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear
Cutting part under 1,00 mm

COMPENSATING SHIM FOR PUNCH

Not necessary

ADDITIONAL COSTS FOR PUNCH GUIDE

Additional keyway

SET OF COMPENSATING SHIMS FOR DIE

1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1
Shimkeeper (0,5 mm)	499B1M95

ADDITIONAL COSTS FOR DIES

Reinforced die
H-PM® Quality
Additional pin hole

ps:®alpha-compact I STATION B

DIAMETER UP TO 31,7 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:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-45-90-135°

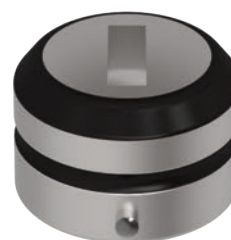
Asym. shapes: 0-90-180-270°

Tool shapes integrated in guide

ps:® alpha-compact I STATION B

DIAMETER UP TO 31,7 MM

		PART NO.
COMPLETE PUNCH ASSEMBLY		
	Round	4017B01
	Square	4017B02
	Rectangle	4017B03
	Oblong	4017B04
	O.D. Ground Special Shape	4017B0G
	EDM Required Special Shape	4017B0E
HEAD UNIT		
	For all shapes	4093B01
PUNCH BODY (H-PM®)		
	Round	4023B01
	Square	4023B02
	Rectangle	4023B03
	Oblong	4023B04
	O.D. Ground Special Shape	4023B0G
	EDM Required Special Shape	4023B0E
PUNCH GUIDE		
	Round	4032B01
	Square	4032B02
	Rectangle	4032B03
	Oblong	4032B04
	O.D. Ground Special Shape	4032B0G
	EDM Required Special Shape	4032B0E
DIE (HWS)		
	Round	4052B01
	Square	4052B02
	Rectangle	4052B03
	Oblong	4052B04
	O.D. Ground Special Shape	4052B0G
	EDM Required Special Shape	4052B0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
O-Ring (in punch guide)	4092B51	TICN coating
PU ejector Ø 3x6 (in punch)	4092P03	T-MAX coating
PU ejector Ø 6x10 (in punch)	4092P06	A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	Reinforced die
Shimkeeper (0,5 mm)	499B1M95	H-PM® Quality
		Additional pin hole

ps:®beta-V2® | STATION B

DIAMETER UP TO 31,7 MM



HEAD UNIT

Canister for sheet thickness up to 6 mm

Spring

10 mm length adjustment by thread

Oil channel for sheet lubrication



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:

All shapes: 0-90-225°

STRIPPER

Interchangeable stripper plate

ps:®beta-V2® | STATION B

DIAMETER UP TO 31,7 MM

PART-NO.

COMPLETE PUNCH ASSEMBLY		
	Round	4010B01
	Square	4010B02
	Rectangle	4010B03
	Oblong	4010B04
	O.D. Ground Special Shape	4010B0G
	EDM Required Special Shape	4010B0E

HEAD UNIT		
	For all shapes	4090B10

PUNCH BODY (H-PM®)		
	Round	4020B01
	Square	4020B02
	Rectangle	4020B03
	Oblong	4020B04
	O.D. Ground Special Shape	4020B0G
	EDM Required Special Shape	4020B0E

PUNCH GUIDE		
	For all shapes	4030B05

STRIPPER		
	Round	4040B01
	Square	4040B02
	Rectangle	4040B03
	Oblong	4040B04
	O.D. Ground Special Shape	4040B0G
	EDM Required Special Shape	4040B0E

DIE (HWS)		
	Round	4052B01
	Square	4052B02
	Rectangle	4052B03
	Oblong	4052B04
	O.D. Ground Special Shape	4052B0G
	EDM Required Special Shape	4052B0E

SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
O-Ring (in punch guide)	4092B51	TICN coating
PU ejector Ø 3x6 (in punch)	4092P03	T-MAX coating
PU ejector Ø 6x10 (in punch)	4092P06	A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway

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



ps:®beta-compact I STATION B

DIAMETER UP TO 31,7 MM



HEAD UNIT

Canister for sheet thickness up to 6 mm

Spring

10 mm length adjustment by thread

Oil channel for sheet lubrication



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:

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 I STATION B

DIAMETER UP TO 31,7 MM

		PART NO.
COMPLETE PUNCH ASSEMBLY		
	Round	4016B01
	Square	4016B02
	Rectangle	4016B03
	Oblong	4016B04
	O.D. Ground Special Shape	4016B0G
	EDM Required Special Shape	4016B0E
HEAD UNIT		
	For all shapes	4094B10
PUNCH BODY (H-PM®)		
	Round	4024B01
	Square	4024B02
	Rectangle	4024B03
	Oblong	4024B04
	O.D. Ground Special Shape	4024B0G
	EDM Required Special Shape	4024B0E
PUNCH GUIDE		
	Round	4036B01
	Square	4036B02
	Rectangle	4036B03
	Oblong	4036B04
	O.D. Ground Special Shape	4036B0G
	EDM Required Special Shape	4036B0E
DIE (HWS)		
	Round	4052B01
	Square	4052B02
	Rectangle	4052B03
	Oblong	4052B04
	O.D. Ground Special Shape	4052B0G
	EDM Required Special Shape	4052B0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
O-Ring (in punch guide)	4092B51	TICN coating
PU ejector Ø 3x6 (in punch)	4092P03	T-MAX coating
PU ejector Ø 6x10 (in punch)	4092P06	A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	Reinforced die
Shimkeeper (0,5 mm)	499B1M95	H-PM® Quality
		Additional pin hole

PASS STANDARD I STATION C

DIAMETER UP TO 50,8 MM



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6 mm

3 mm length adjustment
by using compensating shims

Keyway: 0-90°

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

Clamping-screw 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.

GUIDE ASSEMBLY		
	For all shapes	499C01

PUNCH BODY (H-PM®)		
	Round	4022C01
	Square	4022C02
	Rectangle	4022C03
	Oblong	4022C04
	O.D. Ground Special Shape	4022C0G
	EDM Required Special Shape	4022C0E

STRIPPER		
	Round	4032C01
	Square	4032C02
	Rectangle	4032C03
	Oblong	4032C04
	O.D. Ground Special Shape	4032C0G
	EDM Required Special Shape	4032C0E

DIE (HWS)		
	Round	4052C01
	Square	4052C02
	Rectangle	4052C03
	Oblong	4052C04
	O.D. Ground Special Shape	4052C0G
	EDM Required Special Shape	4052C0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating
Set clamping-springs with screws	499C71	A-MAX coating
Guiding key with screws	499C63	WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
		Cutting part under 1,00 mm
SET OF COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
1x0,4 mm/1x0,8 mm/1x1,2 mm	499C1S1	Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499C2M1	H-PM® Quality
		Additional pin hole

ps:®beta-V2® | STATION C

DIAMETER UP TO 50,8 MM



GUIDE ASSEMBLY

Screw M12

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: 0-90°

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

Fast and easy clamping system for stripper



PUNCH BODY

Thread M12 with oil channel

Punch body made with premium H-PM®

STRIPPER

Interchangeable stripper plate

ps:®beta-V2® | STATION C

DIAMETER UP TO 50,8 MM

PART NO.

GUIDE ASSEMBLY		
	For all shapes	4030C01

PUNCH BODY (H-PM®)		
	Round	4020C01
	Square	4020C02
	Rectangle	4020C03
	Oblong	4020C04
	O.D. Ground Special Shape	4020C0G
	EDM Required Special Shape	4020C0E

STRIPPER		
	Round	4040C01
	Square	4040C02
	Rectangle	4040C03
	Oblong	4040C04
	O.D. Ground Special Shape	4040C0G
	EDM Required Special Shape	4040C0E

DIE (HWS)		
	Round	4052C01
	Square	4052C02
	Rectangle	4052C03
	Oblong	4052C04
	O.D. Ground Special Shape	4052C0G
	EDM Required Special Shape	4052C0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating
		A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499C2M1	H-PM® Quality
		Additional keyway

ps:®beta-V2® SLITTING TOOL I STATION C



GUIDE ASSEMBLY

Screw M12

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: 0-90°

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

Fast and easy clamping system for stripper

SLITTING TOOL ADAPTER

2 fixing threads M6

Thread M12 with oil channel

SLITTING TOOL

Punch body made with premium H-PM®

STRIPPER

Interchangeable stripper plate

ps:®beta-V2® SLITTING TOOL I STATION C

PART NO.

GUIDE ASSEMBLY		
	For all shapes	4030C01

SLITTING TOOL ADAPTER		
	For all shapes	4220CT00

SLITTING TOOL (MAX. 6,35X50) / (H-PM®)		
	Rectangle	4020CT03
	Oblong	4020CT04
	Trapezoid G09	4020CT0G
	Double Trapezoid E03	4020CT0E

STRIPPER		
	Rectangle	4040CT03
	Oblong	4040CT04
	Trapezoid G09	4040CT0G
	Double Trapezoid E03	4040CT0E

REVERSIBLE PLATE ADAPTER		
		4390CT00

REVERSIBLE PLATE (H-PM®)		
	Rectangle	4052CT03
	Oblong	4052CT04
	Trapezoid G09	4052CT0G
	Double Trapezoid E03	4052CT0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating
		A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR SLITTING TOOL ADAPTER		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR REVERSIBLE PLATE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499CT60	Additional keyway

PASS STANDARD I STATION D

DIAMETER UP TO 88,9 MM



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6 mm

3 mm length adjustment
by using compensating shims

Keyway: 0-90°

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

Clamping-screw 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.

GUIDE ASSEMBLY		
	For all shapes	499D01

PUNCH BODY (H-PM®)		
	Round	4022D01
	Square	4022D02
	Rectangle	4022D03
	Oblong	4022D04
	O.D. Ground Special Shape	4022D0G
	EDM Required Special Shape	4022D0E

STRIPPER		
	Round	4032D01
	Square	4032D02
	Rectangle	4032D03
	Oblong	4032D04
	O.D. Ground Special Shape	4032D0G
	EDM Required Special Shape	4032D0E

DIE (HWS)		
	Round	4052D01
	Square	4052D02
	Rectangle	4052D03
	Oblong	4052D04
	O.D. Ground Special Shape	4052D0G
	EDM Required Special Shape	4052D0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating
Set clamping-springs with screws	499D71	A-MAX coating
Guiding key with screws	499D63	WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
		Cutting part under 1,00 mm
SET OF COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
1x0,4 mm/1x0,8 mm/1x1,2 mm	499D3S1	Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499D2M1	H-PM® Quality
		Additional keyway

ps:®beta-V2® | STATION D

DIAMETER UP TO 88,9 MM



GUIDE ASSEMBLY

Screw M12

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: 0-90°

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

Fast and easy clamping system for stripper



PUNCH BODY

Thread M12 with oil channel

Punch body made with premium H-PM®

STRIPPER

Interchangeable stripper plate

ps:®beta-V2® | STATION D

DIAMETER UP TO 88,9 MM

PART NO.

GUIDE ASSEMBLY		
	For all shapes	4030D01

PUNCH BODY (H-PM®)		
	Round	4020D01
	Square	4020D02
	Rectangle	4020D03
	Oblong	4020D04
	O.D. Ground Special Shape	4020D0G
	EDM Required Special Shape	4020D0E

STRIPPER		
	Round	4040D01
	Square	4040D02
	Rectangle	4040D03
	Oblong	4040D04
	O.D. Ground Special Shape	4040D0G
	EDM Required Special Shape	4040D0E

DIE (HWS)		
	Round	4052D01
	Square	4052D02
	Rectangle	4052D03
	Oblong	4052D04
	O.D. Ground Special Shape	4052D0G
	EDM Required Special Shape	4052D0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating
		A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499D2M1	H-PM® Quality
		Additional keyway

ps:®beta-V2® SLITTING TOOL I STATION D



GUIDE ASSEMBLY

Screw M12

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: 0-90°

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

Fast and easy clamping system for stripper



SLITTING TOOL ADAPTER

4 fixing threads M6

Thread M12 with oil channel

SLITTING TOOL

Punch body made with premium H-PM®



STRIPPER

Interchangeable stripper plate

ps:®beta-v2® SLITTING TOOL I STATION D

		PART NO.
GUIDE ASSEMBLY		
	For all shapes	4030D01
SLITTING TOOL ADAPTER		
	For all shapes	4220DT00
SLITTING TOOL (MAX. 6,35X85) / (H-PM®)		
	Rectangle	4020DT03
	Oblong	4020DT04
	Trapezoid G09	4020DT0G
	Double Trapezoid E03	4020DT0E
STRIPPER		
	Rectangle	4040DT03
	Oblong	4040DT04
	Trapezoid G09	4040DT0G
	Double Trapezoid E03	4040DT0E
REVERSIBLE PLATE ADAPTER		
		4390DT00
REVERSIBLE PLATE (H-PM®)		
	Rectangle	4052DT03
	Oblong	4052DT04
	Trapezoid G09	4052DT0G
	Double Trapezoid E03	4052DT0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating
		A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR SLITTING TOOL ADAPTER		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR REVERSIBLE PLATE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499DT60	Additional keyway

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



GUIDE ASSEMBLY

Screw M12

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: 0-90°

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

Fast and easy clamping system for stripper



SLITTING TOOL ADAPTER

4 fixing threads M6

Thread M12 with oil channel

SLITTING TOOL

Punch body made with premium H-PM®



STRIPPER

Interchangeable stripper plate

One or two-sided relief for punching close to clamp

ps:®beta-V2® SLITTING TOOL I STATION D

CLOSE TO CLAMP

PART NO.

GUIDE ASSEMBLY		
	For all shapes	4030DTP01

SLITTING TOOL ADAPTER		
	For all shapes	4220DT00

SLITTING TOOL (MAX. 6,35X85) / (H-PM®)		
	Rectangle	4020DT03
	Oblong	4020DT04
	Trapezoid G09	4020DT0G
	Double Trapezoid E03	4020DT0E

STRIPPER ONE-SIDED FREE		
	Rectangle	4040DTP03-1
	Oblong	4040DTP04-1
	Trapezoid G09	4040DTP0G-1
	Double Trapezoid E03	4040DTP0E-1

STRIPPER TWO-SIDED FREE		
	Rectangle	4040DTP03-2
	Oblong	4040DTP04-2
	Trapezoid G09	4040DTP0G-2
	Double Trapezoid E03	4040DTP0E-2

DIE ONE-SIDED FREE (HWS)		
	Rectangle	4052DTP03-1
	Oblong	4052DTP04-1
	Trapezoid G09	4052DTP0G-1
	Double Trapezoid E03	4052DTP0E-1

DIE TWO-SIDED FREE (HWS)		
	Rectangle	4052DTP03-2
	Oblong	4052DTP04-2
	Trapezoid G09	4052DTP0G-2
	Double Trapezoid E03	4052DTP0E-2

SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating

A-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear

Additional keyway

Cutting part under 1,00 mm

COMPENSATING SHIM FOR SLITTING TOOL ADAPTER		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway

SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499D2M1	H-PM® Quality
		Additional keyway



Function:

The ps:®clean-cut for THICK TURRET machines was developed to obtain slitting perforations without any witness marks.

The typical nibbling slitting tool leaves marks that can be seen and are noticeable. These marks normally have to be polished manually to be removed.



When using the ps:®clean-cut no witness marks are made and only smooth and clean cuts can be seen - without the need of additional rework.

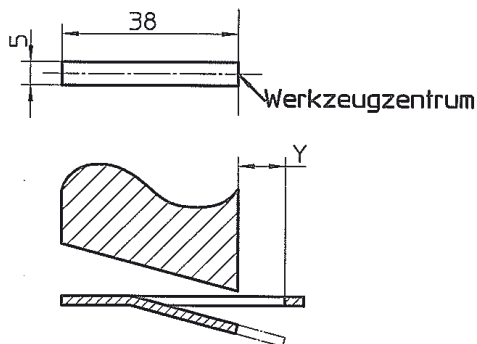


Functional principle of the tool:

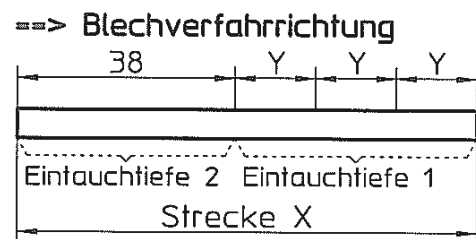
Continuous slitting. The shavings will be guided within the die and will be separated into pieces with the second slitting unit.

Programming information:

The punch shape rectangle 5x38 is located asymmetrically to the tool center. Thus, the beginning of the slitting point is located at the tool center. The endpoint of the slit is transferred by 38 mm to the tool center.



The way X will be cut with a punching depth 1 (continuous slit - see sketch). The last hit has to be programmed with a punching depth 2 (deep hit - see sketch), in order to specify the way length exactly and remove the remaining slug out of the tool.



Technical handling of the tool:

The upper part has got a total length of 208,5 mm (see drawing 499110001).

The die is spring-loaded and 4 mm higher (see drawing 499110001).

The result of this is the increasing programming working position of minimum 4 mm (better would be 6 mm).

Step 1:

The punching depth 1 (continuous slitting) has to be determined by fine adjustment on the machine. In this case the slit on the sheet upper side must have a length of 32 to 37 mm. For this reason one sheet sample (size ~ 60 x 60 mm to 100 x 100 mm) should be placed by hand onto the die. After the test hit the station can be returned to changing position and the sheet can be removed.

WARNING: Please do not use a complete sheet plate in the clamp for test hits, as manual removal of the sheet is almost impossible.

Step 2:

The punching depth 2 (deep end hit) has to be determined by fine adjustment on the machine.

In this case the slug must be punched 2,0 to 3,0 mm into the die on the short side of the whisper shear.

(Theoretical calculation: punching depth 1 + sheet thickness + 2 to 3 mm)

ps:®clean-cut

FOR MACHINE TYPE THICK TURRET - STATION D

		PART-NO.
COMPLETE TOOL		
		499110001
COMPLETE UPPER PART		
		499110001-1
COMPLETE DIE		
		499110001-2
SPARE PARTS TO UPPER ASSY		
Punch insert (Re 5x38)		499110040
Stripper plate		499110030
SPARE PARTS TO DIE ASSY		
Die plate		199110050
Guillotine unit cpl. incl. slitting plate		199110001-3
Slitting plate - top		199110140
Slitting plate - bottom		199110150
Set springs for die plate		199110903
Set shoulder screws for die plate		199110904



TECHNICAL INFORMATION		ADDITIONAL COSTS FOR SLITTING BLADE
Aluminium:	0,5 - 1,2 mm (step: 16 mm)	TiCN coating (for stainless steel-sheet)
Steel:	0,5 - 1,2 mm (step: 16 mm)	A-MAX coating (for aluminium sheet)
Stainless steel:	0,5 - 1,2 mm (step: 16 mm)	T-MAX coating (for zinc steel)
Aluminium:	1,25 - 1,5 mm (step: 12 mm)	
Steel:	1,25 - 1,5 mm (step: 12 mm)	
Aluminium:	1,6 - 2,0 mm (step: 10 mm)	
		ADDITIONAL COSTS FOR STRIPPER
		Polished version for low-scratch material handling

MAX. REGRINDING LENGTH		ADDITIONAL COSTS FOR DIE PLATE
Punch: (Lmin = 201,5 mm)	7 mm	Polished version for low-scratch material handling
Die plate: (Hmin = 33,5 mm)	0,5 mm	

PASS STANDARD I STATION E

DIAMETER UP TO 114,3 MM



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6 mm

3 mm length adjustment by using compensating shims

Keyway: 0-90°

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

Clamping-screw 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.

GUIDE ASSEMBLY		
	For all shapes	499E01

PUNCH BODY (H-PM®)		
	Round	4022E01
	Square	4022E02
	Rectangle	4022E03
	Oblong	4022E04
	O.D. Ground Special Shape	4022E0G
	EDM Required Special Shape	4022E0E

STRIPPER		
	Round	4032E01
	Square	4032E02
	Rectangle	4032E03
	Oblong	4032E04
	O.D. Ground Special Shape	4032E0G
	EDM Required Special Shape	4032E0E

DIE (HWS)		
	Round	4052E01
	Square	4052E02
	Rectangle	4052E03
	Oblong	4052E04
	O.D. Ground Special Shape	4052E0G
	EDM Required Special Shape	4052E0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating
Set clamping-springs with screws	499E71	A-MAX coating
Guiding key with screws	499E63	WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
		Cutting part under 1,00 mm
SET OF COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E3S1	Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E2M1	H-PM® Quality
		Additional keyway

ps:®beta-V2® | STATION E

DIAMETER UP TO 114,3 MM



GUIDE ASSEMBLY

Screw M12

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: 0-90°

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

Fast and easy clamping system for stripper

PUNCH BODY

Thread M12 with oil channel

Punch body made with premium H-PM®

STRIPPER

Interchangeable stripper plate

ps:®beta-v2® | STATION E

DIAMETER UP TO 114,3 MM

PART NO.

GUIDE ASSEMBLY		
	For all shapes	4030E01

PUNCH BODY (H-PM®)		
	Round	4020E01
	Square	4020E02
	Rectangle	4020E03
	Oblong	4020E04
	O.D. Ground Special Shape	4020E0G
	EDM Required Special Shape	4020E0E

STRIPPER		
	Round	4040E01
	Square	4040E02
	Rectangle	4040E03
	Oblong	4040E04
	O.D. Ground Special Shape	4040E0G
	EDM Required Special Shape	4040E0E

DIE (HWS)		
	Round	4052E01
	Square	4052E02
	Rectangle	4052E03
	Oblong	4052E04
	O.D. Ground Special Shape	4052E0G
	EDM Required Special Shape	4052E0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating
		A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E2M1	H-PM® Quality
		Additional keyway

ps:®beta-V2® SLITTING TOOL I STATION E



GUIDE ASSEMBLY

Screw M12

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: 0-90°

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

Fast and easy clamping system for stripper

SLITTING TOOL ADAPTER

4 fixing threads M6

Thread M12 with oil channel

SLITTING TOOL

Punch body made with premium H-PM®

STRIPPER

Interchangeable stripper plate

ps:®beta-V2® SLITTING TOOL I STATION E

		PART NO.
GUIDE ASSEMBLY		
	For all shapes	4030E01
SLITTING TOOL ADAPTER		
	For all shapes	4220ET00
SLITTING TOOL (MAX. 6,35X111) / (H-PM®)		
	Rectangle	4020ET03
	Oblong	4020ET04
	Trapezoid G09	4020ET0G
	Double Trapezoid E03	4020ET0E
STRIPPER		
	Rectangle	4040ET03
	Oblong	4040ET04
	Trapezoid G09	4040ET0G
	Double Trapezoid E03	4040ET0E
REVERSIBLE PLATE ADAPTER		
		4390ET00
REVERSIBLE PLATE (H-PM®)		
	Rectangle	4052ET03
	Oblong	4052ET04
	Trapezoid G09	4052ET0G
	Double Trapezoid E03	4052ET0E



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating
		A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR SLITTING TOOL ADAPTER		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR REVERSIBLE PLATE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499ET60	Additional keyway

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



GUIDE ASSEMBLY

Screw M12

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: 0-90°

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

Fast and easy clamping system for stripper

SLITTING TOOL ADAPTER

4 fixing threads M6

Thread M12 with oil channel

SLITTING TOOL

Punch body made with premium H-PM®

STRIPPER

Interchangeable stripper plate

One or two-sided relief for punching close to clamp

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

PART NO.

GUIDE ASSEMBLY		
	For all shapes	4030ETP01

SLITTING TOOL ADAPTER		
	For all shapes	4220ET00

SLITTING TOOL (MAX. 6,35X111) / (H-PM®)		
	Rectangle	4020ET03
	Oblong	4020ET04
	Trapezoid G09	4020ET0G
	Double Trapezoid E03	4020ET0E

STRIPPER ONE-SIDED FREE		
	Rectangle	4040ETP03-1
	Oblong	4040ETP04-1
	Trapezoid G09	4040ETP0G-1
	Double Trapezoid E03	4040ETP0E-1

STRIPPER TWO-SIDED FREE		
	Rectangle	4040ETP03-2
	Oblong	4040ETP04-2
	Trapezoid G09	4040ETP0G-2
	Double Trapezoid E03	4040ETP0E-2

DIE ONE-SIDED FREE (HWS)		
	Rectangle	4052ETP03-1
	Oblong	4052ETP04-1
	Trapezoid G09	4052ETP0G-1
	Double Trapezoid E03	4052ETP0E-1

DIE TWO-SIDED FREE (HWS)		
	Rectangle	4052ETP03-2
	Oblong	4052ETP04-2
	Trapezoid G09	4052ETP0G-2
	Double Trapezoid E03	4052ETP0E-2

SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating

A-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear

Additional keyway

Cutting part under 1,00 mm

COMPENSATING SHIM FOR SLITTING TOOL ADAPTER		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway

SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIES
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E2M1	H-PM® Quality
		Additional keyway





MULTITOOl

ps:®multitool

FOR YOUR PRIMA POWER MACHINES

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ps:®MTP8Ri3-16 I INSERTS

FOR MACHINE TYPE PRIMA POWER

SUITABLE FOR SHEET THICKNESS UP TO 6 MM



POS.-NO.

PART-NO.

PUNCH			
	Round	1	413161-1
	Square	1	413162-1
	Rectangle	1	413163-1
	Oblong	1	413164-1
	O.D. Ground Special Shape	1	41316G-1
	EDM Required Special Shape	1	41316E-1

STRIPPER			
	Round	2	415161
	Square	2	415162
	Rectangle	2	415163
	Oblong	2	415164
	O.D. Ground Special Shape	2	41516G
	EDM Required Special Shape	2	41516E

8-STATION STRIPPER *			
	Optional - shape adaptable stripper		450802000

DIE (HWS)			
	Round	3	414161
	Square	3	414162
	Rectangle	3	414163
	Oblong	3	414164
	O.D. Ground Special Shape	3	41416G
	EDM Required Special Shape	3	41416E

SPARE PARTS		ADDITIONAL COSTS FOR PUNCH	
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating	
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating	

INDEX	ADDITIONAL COSTS FOR DIES
-------	---------------------------

*** Stripper - adaptable to shape (form)**
Optional, one 8-station stripper, adaptable to shape, can be used in order to avoid marks on the sheet surface (e.g. when using polished aluminium).

Reinforced die
H-PM® Quality
Additional pin hole
SET OF COMPENSATING SHIMS FOR DIE

2x0,1 mm/2x0,3 mm/2x0,5 mm 41416US

ps:®MTP8Ri3-16 | ADAPTER

FOR MACHINE TYPE PRIMA POWER

SUITABLE FOR SHEET THICKNESS UP TO 6 MM

	POS.-NO.	PART-NO.
8-STATION PUNCH UNIT		
(without punch or stripper inserts)	1	450800000
8-STATION DIE UNIT		
(without die inserts)	2	450802100



ps:®MTP3Ri3-31,75 I INSERTS

FOR MACHINE TYPE PRIMA POWER

SUITABLE FOR SHEET THICKNESS UP TO 6 MM



	POS.-NO.	PART-NO.
PUNCH		
Punch head	1	450301700
Round	2	413191
Square	2	413192
Rectangle	2	413193
Oblong	2	413194
O.D. Ground Special Shape	2	41319G
EDM Required Special Shape	2	41319E

STRIPPER		
Round	3	415191
Square	3	415192
Rectangle	3	415193
Oblong	3	415194
O.D. Ground Special Shape	3	41519G
EDM Required Special Shape	3	41519E

3-STATION STRIPPER *		
Optional - shape adaptable stripper		450302000

DIE (HWS)		
Round	4	414191
Square	4	414192
Rectangle	4	414193
Oblong	4	414194
O.D. Ground Special Shape	4	41419G
EDM Required Special Shape	4	41419E

SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TiCN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating

INDEX	ADDITIONAL COSTS FOR DIES
-------	---------------------------

*** Stripper - adaptable to shape (form)**
Optional, one 3-station stripper, adaptable to shape, can be used in order to avoid marks on the sheet surface (e.g. when using polished aluminium).

Reinforced die
H-PM® Quality
Additional pin hole

SET OF COMPENSATING SHIMS FOR DIE	
2x0,1 mm/2x0,3 mm/2x0,5 mm	41419US

ps:®MTP3Ri3-31,75 | ADAPTER

FOR MACHINE TYPE PRIMA POWER

SUITABLE FOR SHEET THICKNESS UP TO 6 MM

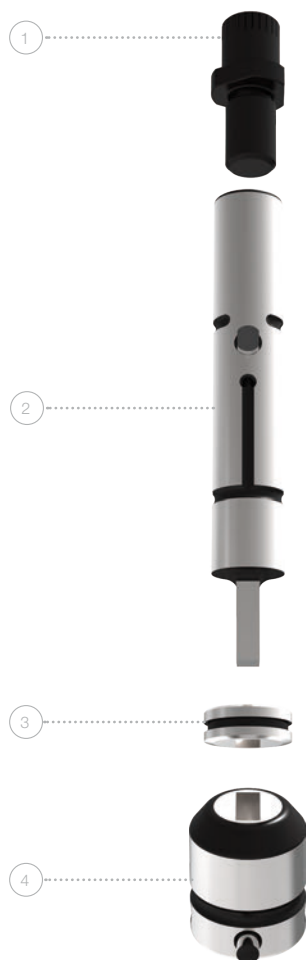
	POS.-NO.	PART-NO.
3-STATION PUNCH UNIT		
(without punch or stripper inserts)	1	450300000
3-STATION DIE UNIT		
(without die inserts)	2	450301900



ps:®MTP8RiA-12,7 I INSERTS

FOR MACHINE TYPE PRIMA POWER

SUITABLE FOR SHEET THICKNESS UP TO 6 MM



	POS.-NO.	PART-NO.
PUNCH BODY (H-PM®)		
Punch head	1	453801800
Round	2	4020A01
Square	2	4020A02
Rectangle	2	4020A03
Oblong	2	4020A04
O.D. Ground Special Shape	2	4020A0G
EDM Required Special Shape	2	4020A0E
STRIPPER		
Round	3	4040A01
Square	3	4040A02
Rectangle	3	4040A03
Oblong	3	4040A04
O.D. Ground Special Shape	3	4040A0G
EDM Required Special Shape	3	4040A0E
DIE (HWS)		
Round	4	4052A01
Square	4	4052A02
Rectangle	4	4052A03
Oblong	4	4052A04
O.D. Ground Special Shape	4	4052A0G
EDM Required Special Shape	4	4052A0E

SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TiCN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating
		A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR DIES
Not necessary		Reinforced die
		H-PM® Quality
		Additional pin hole
COMPENSATING SHIM FOR DIE		
2x0,1 mm/2x0,3 mm/2x0,5 mm	41416US	

ps:®MTP8RiA-12,7 | ADAPTER

FOR MACHINE TYPE PRIMA POWER

SUITABLE FOR SHEET THICKNESS UP TO 6 MM

	POS.-NO.	PART-NO.		POS.-NO.	PART-NO.
8-STATION PUNCH UNIT PIN			8-STATION PUNCH UNIT I-RAM		
(without punch or stripper inserts)	1	453800000	(without punch or stripper inserts)	1	453800010
8-STATION DIE UNIT			8-STATION DIE UNIT		
(without die inserts)	2	453802100	(without die inserts)	2	453802100



ps:®MTP3RiB-31,75 I INSERTS

FOR MACHINE TYPE PRIMA POWER

SUITABLE FOR SHEET THICKNESS UP TO 6 MM



	POS.-NO.	PART-NO.
PUNCH BODY (H-PM®)		
Punch head	1	450301700
Round	2	4020B01
Square	2	4020B02
Rectangle	2	4020B03
Oblong	2	4020B04
O.D. Ground Special Shape	2	4020B0G
EDM Required Special Shape	2	4020B0E
STRIPPER		
Round	3	4040B01
Square	3	4040B02
Rectangle	3	4040B03
Oblong	3	4040B04
O.D. Ground Special Shape	3	4040B0G
EDM Required Special Shape	3	4040B0E
DIE (HWS)		
Round	4	4052B01
Square	4	4052B02
Rectangle	4	4052B03
Oblong	4	4052B04
O.D. Ground Special Shape	4	4052B0G
EDM Required Special Shape	4	4052B0E

SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
PU ejector Ø 3x6 (in punch)	4092P03	TICN coating
PU ejector Ø 6x10 (in punch)	4092P06	T-MAX coating
		A-MAX coating
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Cutting part under 1,00 mm
COMPENSATING SHIM FOR PUNCH		ADDITIONAL COSTS FOR DIES
Not necessary		Reinforced die
		H-PM® Quality
		Additional pin hole
COMPENSATING SHIM FOR DIE		
2x0,1 mm/2x0,3 mm/2x0,5 mm	41419US	

ps:®MTP3RiB-31,75 I ADAPTER

FOR MACHINE TYPE PRIMA POWER

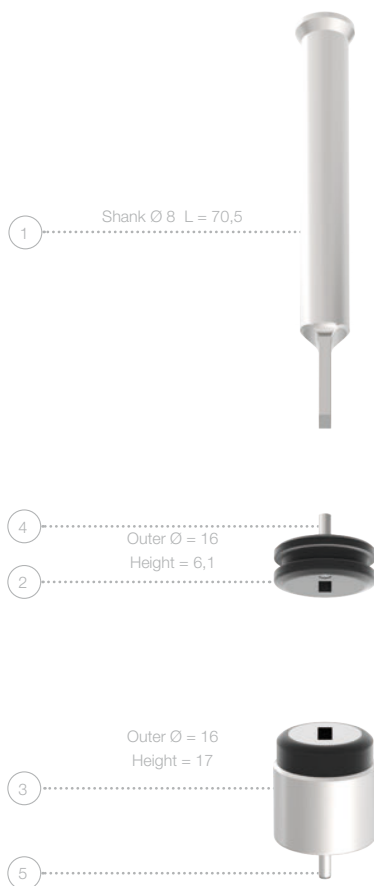
SUITABLE FOR SHEET THICKNESS UP TO 6 MM

	POS.-NO.	PART-NO.		POS.-NO.	PART-NO.
3-STATION PUNCH UNIT PIN			3-STATION PUNCH UNIT I-RAM		
(without punch or stripper inserts)	1	453300000	(without punch or stripper inserts)	1	453300010
3-STATION DIE UNIT			3-STATION DIE UNIT		
(without die inserts)	2	450301910	(without die inserts)	2	450301910



ps:®MTPi24-8 AND ps:®MTP16-8 I INSERTS

FOR MACHINE TYPE PRIMA POWER



	POS.-NO.	PART-NO.
PUNCH (H-PM®)		
Round	1	413121
Square	1	413122
Rectangle	1	413123
Oblong	1	413124
O.D. Ground Special Shape	1	41312G
EDM Required Special Shape	1	41312E
STRIPPER		
Round	2	415121
Square	2+4	415122
Rectangle	2+4	415123
Oblong	2+4	415124
O.D. Ground Special Shape	2+4	41512G
EDM Required Special Shape	2+4	41512E
DIE (HWS)		
Round	3	414121
Square	3+5	414122
Rectangle	3+5	414123
Oblong	3+5	414124
O.D. Ground Special Shape	3+5	41412G
EDM Required Special Shape	3+5	41412E

ADDITIONAL COSTS FOR PUNCHES

TICN coating
T-MAX coating
A-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear
Cutting part under 1,00 mm

ADDITIONAL COSTS FOR DIES

Reinforced die
H-PM® Quality
Additional pin hole

ps:®MTPi24-8 AND ps:®MTP16-8 | ADAPTER

FOR MACHINE TYPE PRIMA POWER

	POS.-NO.	PART-NO.
PUNCH ADAPTER ps:®MTPi24-8		
(without punch or stripper inserts)	1	454224000
DIE ADAPTER ps:®MTPi24-8		
(without die inserts)	2	454224060

	POS.-NO.	PART-NO.
PUNCH ADAPTER ps:®MTP16-8		
(without punch or stripper inserts)	1	454116000
DIE ADAPTER ps:®MTP16-8		
(without die inserts)	2	454116060



ps:®MTPi10-16 AND ps:®MTP8-16 I INSERTS

FOR MACHINE TYPE PRIMA POWER



	POS.-NO.	PART-NO.
PUNCH (H-PM®)		
Round	1	413201
Square	1+6	413202
Rectangle	1+6	413203
Oblong	1+6	413204
O.D. Ground Special Shape	1+6	41320G
EDM Required Special Shape	1+6	41320E
STRIPPER		
Round	2	415201
Square	2	415202
Rectangle	2	415203
Oblong	2	415204
O.D. Ground Special Shape	2	41520G
EDM Required Special Shape	2	41520E
DIE (HWS)		
Round	3	414201
Square	3+5	414202
Rectangle	3+5	414203
Oblong	3+5	414204
O.D. Ground Special Shape	3+5	41420G
EDM Required Special Shape	3+5	41420E

ADDITIONAL COSTS FOR PUNCHES

TICN coating
T-MAX coating
A-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear
Cutting part under 1,00 mm

ADDITIONAL COSTS FOR DIES

Reinforced die
H-PM® Quality
Additional pin hole

ps:®MTPi10-16 AND ps:®MTP8-16 | ADAPTER

FOR MACHINE TYPE PRIMA POWER

	POS.-NO.	PART-NO.
PUNCH ADAPTER ps:®MTPi10-16		
(without punch or stripper inserts)	1	454210000
DIE ADAPTER ps:®MTPi10-16		
(without die inserts)	2	454210060

	POS.-NO.	PART-NO.
PUNCH ADAPTER ps:®MTP8-16		
(without punch or stripper inserts)	1	454108000
DIE ADAPTER ps:®MTP8-16		
(without die inserts)	2	454108060



ps:®MTPi8-24 AND ps:®MTP5-24 I INSERTS

FOR MACHINE TYPE PRIMA POWER



	POS.-NO.	PART-NO.
PUNCH (H-PM®)		
Round	1	413211
Square	1+6	413212
Rectangle	1+6	413213
Oblong	1+6	413214
O.D. Ground Special Shape	1+6	41321G
EDM Required Special Shape	1+6	41321E
STRIPPER		
Round	2	415211
Square	2	415212
Rectangle	2	415213
Oblong	2	415214
O.D. Ground Special Shape	2	41521G
EDM Required Special Shape	2	41521E
DIE (HWS)		
Round	3	414211
Square	3+5	414212
Rectangle	3+5	414213
Oblong	3+5	414214
O.D. Ground Special Shape	3+5	41421G
EDM Required Special Shape	3+5	41421E

ADDITIONAL COSTS FOR PUNCHES

TICN coating
T-MAX coating
A-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear
Cutting part under 1,00 mm

ADDITIONAL COSTS FOR DIES

Reinforced die
H-PM® Quality
Additional pin hole

ps:®MTPi8-24 AND ps:®MTP5-24 | ADAPTER

FOR MACHINE TYPE PRIMA POWER

	POS.-NO.	PART-NO.
PUNCH ADAPTER ps:®MTPi8-24		
(without punch or stripper inserts)	1	454208000
DIE ADAPTER ps:®MTPi8-24		
(without die inserts)	2	454208060

	POS.-NO.	PART-NO.
PUNCH ADAPTER ps:®MTP5-24		
(without punch or stripper inserts)	1	454105000
DIE ADAPTER ps:®MTP5-24		
(without die inserts)	2	454105060



ps:[®]MTP3B I INSERTS

FOR MACHINE TYPE PRIMA POWER



	POS.-NO.	PART-NO.
PUNCH (H-PM[®])		
Round	1	4020B01
Square	1	4020B02
Rectangle	1	4020B03
Oblong	1	4020B04
O.D. Ground Special Shape	1	4020B0G
EDM Required Special Shape	1	4020B0E
STRIPPER		
Round	2	4040B01
Square	2	4040B02
Rectangle	2	4040B03
Oblong	2	4040B04
O.D. Ground Special Shape	2	4040B0G
EDM Required Special Shape	2	4040B0E
DIE (HWS)		
Round	3	4052B01
Square	3	4052B02
Rectangle	3	4052B03
Oblong	3	4052B04
O.D. Ground Special Shape	3	4052B0G
EDM Required Special Shape	3	4052B0E

ADDITIONAL COSTS FOR PUNCHES

TiCN coating
 T-MAX coating
 A-MAX coating
 WT-shear
 DOWT-shear
 2 PT-shear
 4 PT-shear
 Cutting part under 1,00 mm

ADDITIONAL COSTS FOR DIES

Reinforced die
 H-PM[®] Quality
 Additional pin hole

ps:®MTP3B | ADAPTER

FOR MACHINE TYPE PRIMA POWER

	POS.-NO.	PART-NO.
PUNCH ADAPTER ps:®MTP3B		
(without punch or stripper inserts)	1	452301001
DIE ADAPTER ps:®MTP3B		
(without die inserts)	2	452302001



ps:[®]MTPi4B+4 I INSERTS

FOR MACHINE TYPE PRIMA POWER



	POS.-NO.	PART-NO.
PUNCH (H-PM[®])		
Round	1	4020B01
Square	1	4020B02
Rectangle	1	4020B03
Oblong	1	4020B04
O.D. Ground Special Shape	1	4020B0G
EDM Required Special Shape	1	4020B0E
STRIPPER		
Round	2	4040B01
Square	2	4040B02
Rectangle	2	4040B03
Oblong	2	4040B04
O.D. Ground Special Shape	2	4040B0G
EDM Required Special Shape	2	4040B0E
DIE (HWS)		
Round	3	4052B01
Square	3	4052B02
Rectangle	3	4052B03
Oblong	3	4052B04
O.D. Ground Special Shape	3	4052B0G
EDM Required Special Shape	3	4052B0E

ADDITIONAL COSTS FOR PUNCHES

TICN coating
T-MAX coating
A-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear
Cutting part under 1,00 mm

ADDITIONAL COSTS FOR DIES

Reinforced die
H-PM[®] Quality
Additional pin hole

ps:®MTPi4B+4 | ADAPTER

FOR MACHINE TYPE PRIMA POWER

	POS.-NO.	PART-NO.
PUNCH ADAPTER ps:®MTPi4B+4		
(without punch or stripper inserts)	1	452401001
DIE ADAPTER ps:®MTPi4B+4		
(without die inserts)	2	452402001



ps:®MTPi4B+4 I INSERTS

FOR MACHINE TYPE PRIMA POWER

FOR ENGRAVING, FOIL CUTTING, COUNTERSINKING AND STAMPING



	POS.-NO.	PART-NO.
ENGRAVING		
complete set	1	452404101
FOIL CUTTING		
complete set	2	452404106
COUNTERSINKING		
complete set	3	4524041XX
STAMPING		
complete set	4	4524041XX

SPARE PARTS

Green spring - soft	91701025A
Blue spring - medium	91701025B
Red spring - hard	91701025C
Yellow spring - very hard	91701025D
Black spring - very soft	916000046
Brass needle (foil cutting)	199103940
Diamond needle (engraving)	199103962

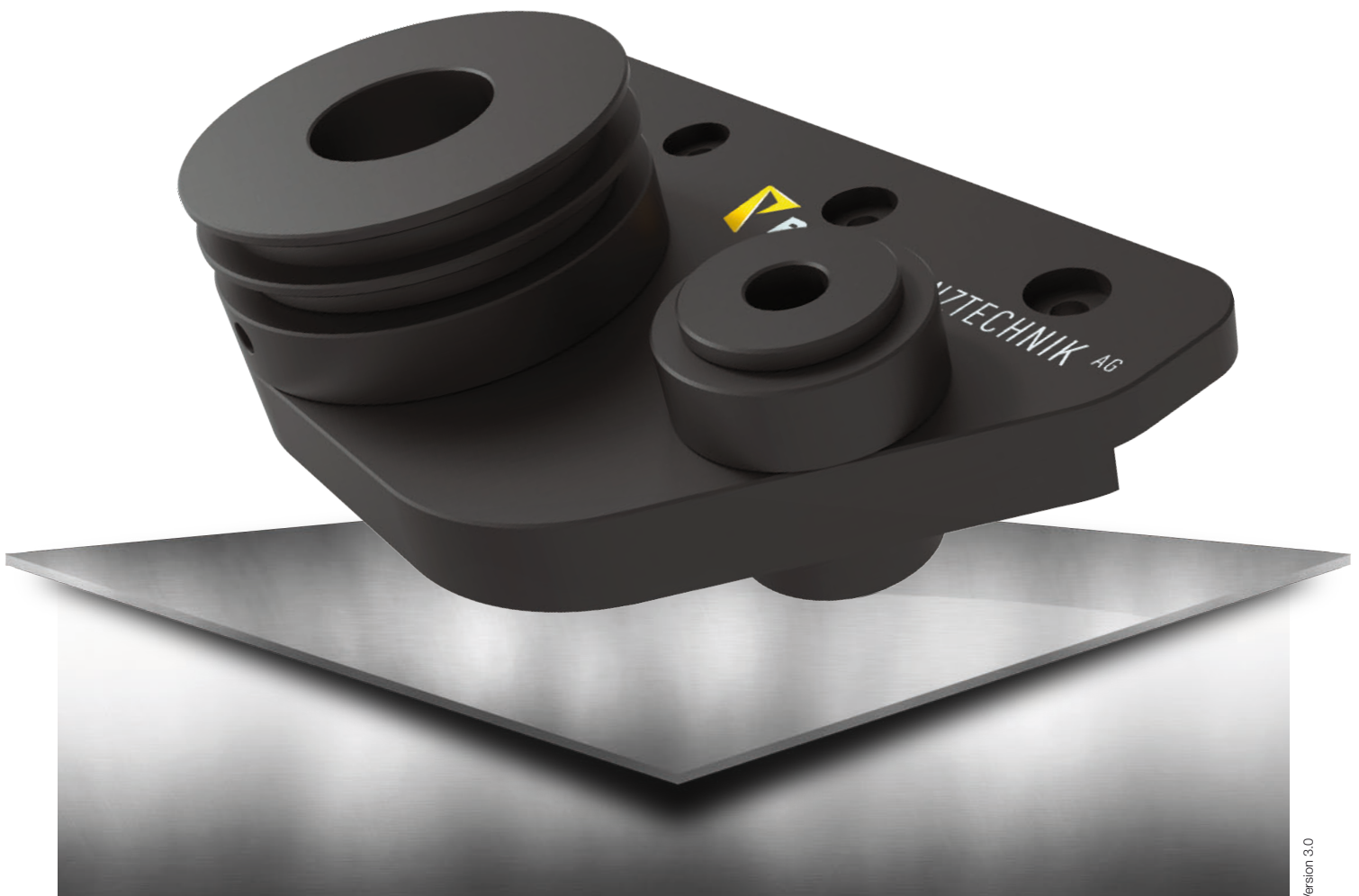
ps:®MTPi4B+4 | ADAPTER

FOR MACHINE TYPE PRIMA POWER

FOR ENGRAVING, FOIL CUTTING, COUNTERSINKING AND STAMPING

	POS.-NO.	PART-NO.
PUNCH ADAPTER ps:®MTPi4B+4		
(without punch or stripper inserts)	1	452401001
DIE ADAPTER ps:®MTPi4B+4-		
(without die inserts)	2	452402001





ACCESSORIES

PASS ACCESSORIES FOR YOUR THICK TURRET SYSTEM

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PASS Adapter	page 76
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PASS Alignment Tools	page 78
PASS T-Handle	page 79

STATION A



STATION B



STATION C



STATION D



STATION E



EQUIPPED PLATE WITH ADAPTER

PART-NO.

COMPLETE SET ASSEMBLY KIT		
Set consists of	499M09SET	
5 assembly adapter (Stat. A-E)		
1 assembling plate		

ADDITIONAL ADAPTER		
Pi135	499M08007	
P110	499M08008	

P110



Pi135



PASS ASSEMBLING SET

FOR PASS GUIDE ASSEMBLY STAT. C, D, E / FOR ps:®multitool STAT. D /

FOR ps:®multi-thread®

PART-NO.

COMPLETE MAINTENANCE KIT

Torque wrench / 25-130Nm

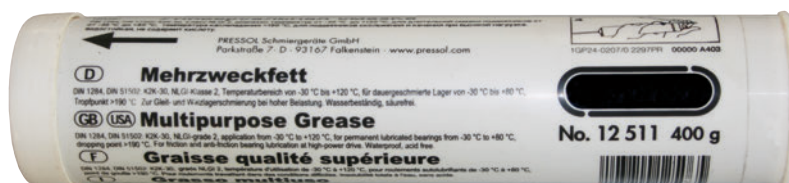
incl. 4 socket wrench
SW 8 / SW10 / SW 12 / SW 14

Multipurpose grease 400 gr.

Triangular whetstone

Diamond needle file with quick-acting clamp

Total price 499MONKIT



PASS ADAPTER

PUNCH ADAPTER

Surface-hardened and polished



DIE ADAPTER

Surface-hardened and polished

2 clamp screws



	STATION	PART-NO.
MACHINE TYPE: PRIMA POWER		
Punch adapter	B/A	401BAS1
Die adapter	B/A	401BAM1
Punch adapter	C/B	401CBS1
Die adapter	C/B	401CBM1 ^(*)
Punch adapter	D/A	401DAS1
Die adapter	D/A	401DAM1
Punch adapter	D/B	401DBS1
Die adapter	D/B	401DBM1
Die adapter upforming	D/B	499400435
Punch adapter	D/C	401DCS1
Die adapter	D/C	401DCM1 ^(*) (⁽²⁾)
Die adapter upforming	D/C	499400434

^(*) for max. sheet thickness 2 mm

⁽²⁾ 2 mm increased

MACHINE TYPE: PIVATIC & WEMO & DALCOS		
Punch adapter	B/A	401BAS3
Die adapter	B/A	401BAM3
Punch adapter	C/B	401CBS3
Die adapter	C/B	401CBM3
Punch adapter	D/A	401DAS3
Die adapter	D/A	401DAM3
Punch adapter	D/B	401DBS3
Die adapter	D/B	401DBM3
Punch adapter	D/C	401DCS3
Die adapter	D/C	not usable

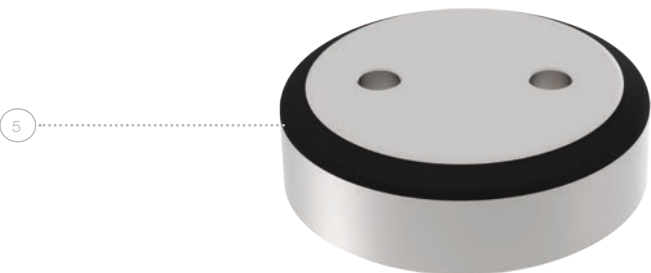
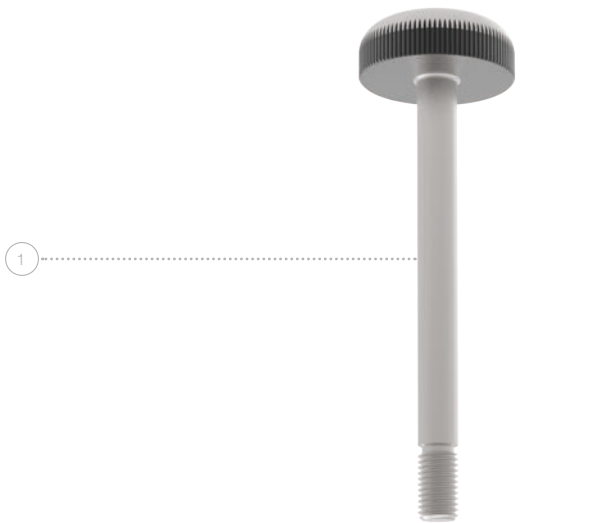
PASS DIES

WITH BRUSH INSERTS

	STATION	PART-NO.
PASS DIES WITH BRUSH INSERTS		
1x Ø13	A	441711A01
3x Ø13	B	441711B01
7x Ø13	C	441711C01
19x Ø13	D	441711D01
35x Ø13	E	441711E01



PASS ALIGNMENT TOOLS



	STATION	POSITION	PART-NO.
ALIGNMENT TOOLS			
Alignment punch	A	*	499701A01
Alignment die	A	*	499701A06
Alignment punch	B	*	499701B01
Alignment die	B	*	499701B06
Alignment punch	C	2	499701C01
Alignment die	C	5	499701C06
Alignment punch	D	*	499701D01
Alignment die	D	*	499701D06
Alignment punch	E	*	499701E01
Alignment die	E	*	499701E06
Calibration adjustment	A-E	3	499701Z01
Handle	A-E	1	499701Z11
Alignment rod	A-E	4	499701Z21

* no picture

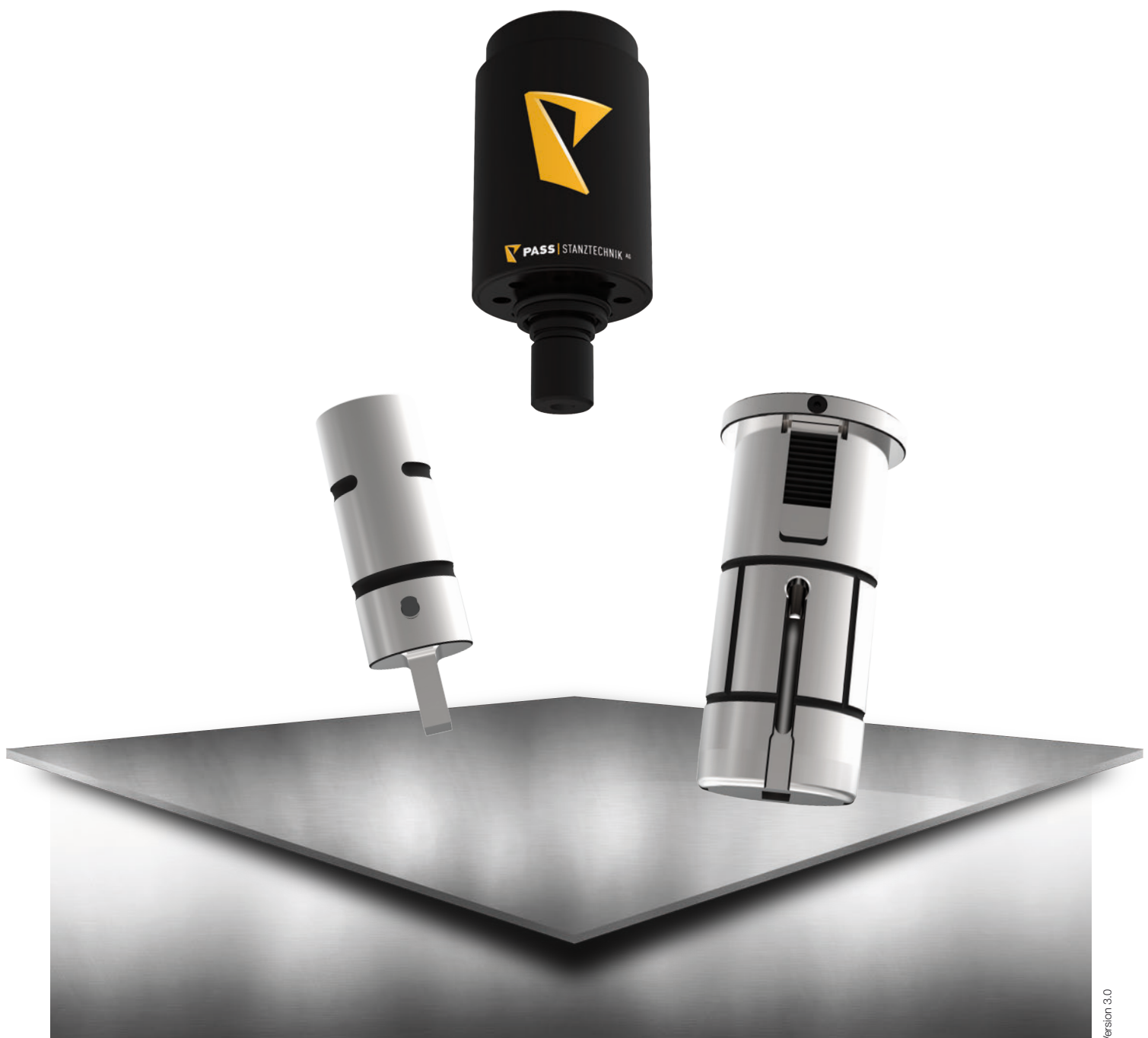
PASS T-HANDLE

FOR STATION C - E

PART-NO.

T-HANDLE		
M14	999000024	
M20	999000028	





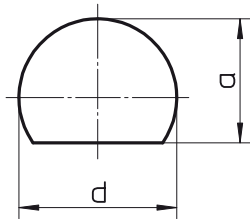
TECHNICAL INFORMATION

INFORMATION ABOUT OUR TOOLS FOR YOUR THICK TURRET SYSTEM

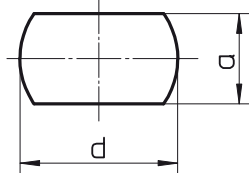
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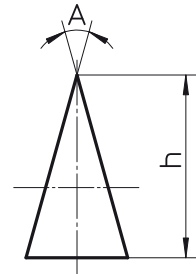
O.D. GROUND SPECIAL SHAPES



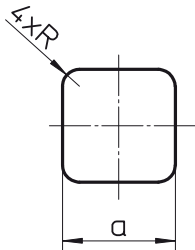
G01



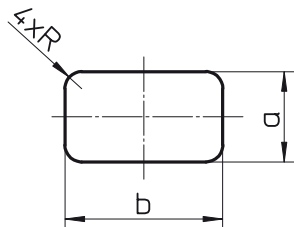
G02



G03



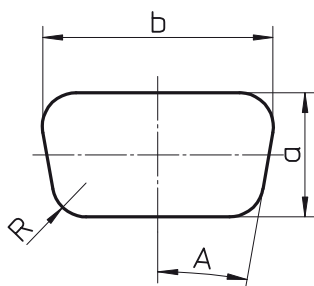
G04



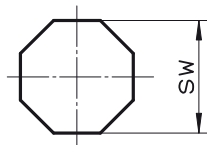
G05



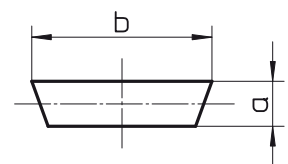
G06



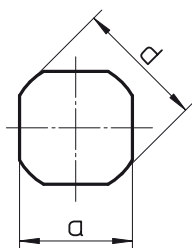
G07



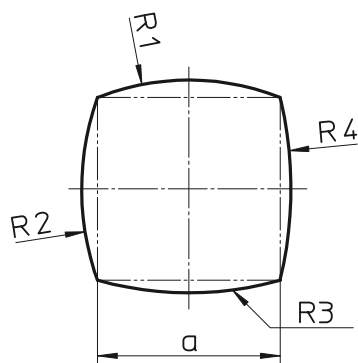
G08



G09

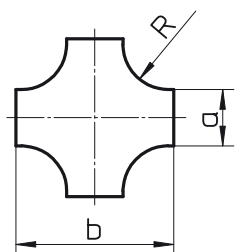


G10

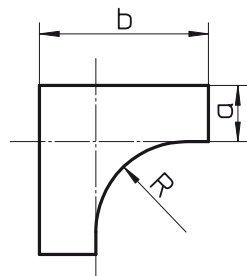


G11

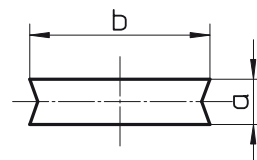
EDM REQUIRED SPECIAL SHAPES



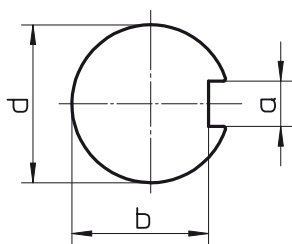
E01



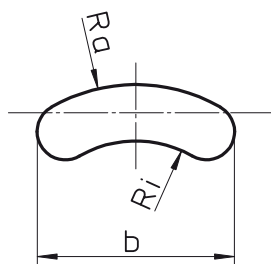
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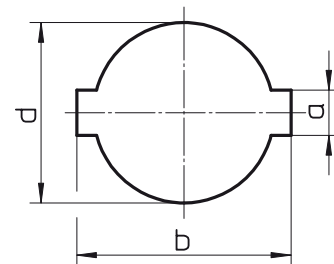
E03



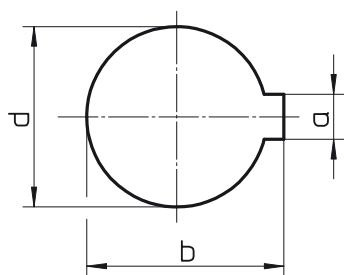
E04



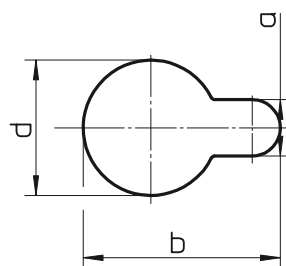
E05



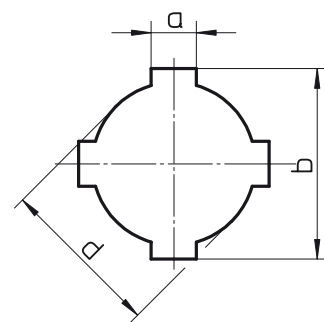
E06



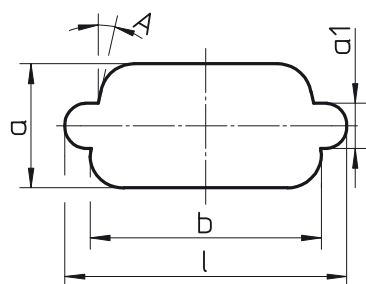
E07



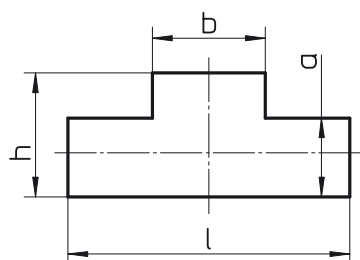
E08



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.

Advantage 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 life time 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 life time.

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.

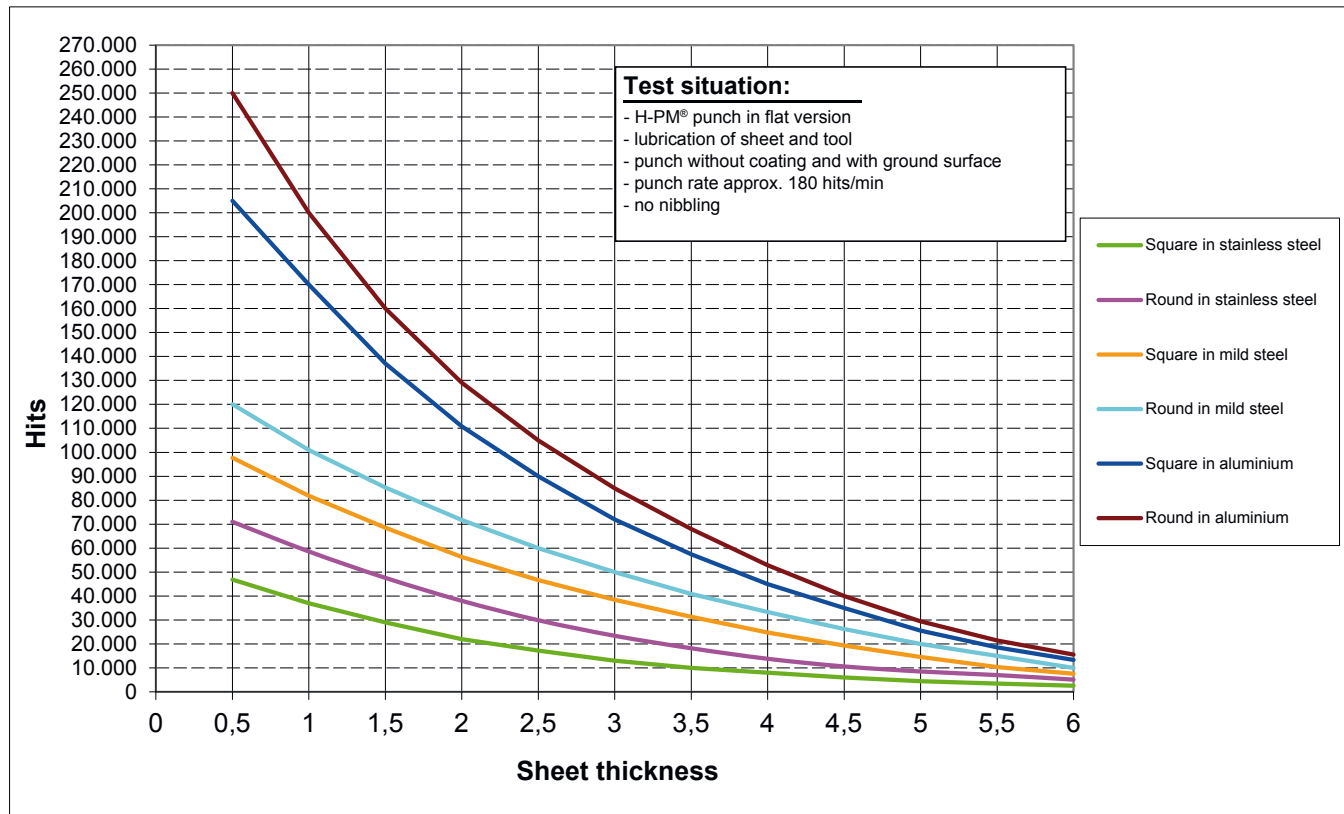
The high ductility of the segregational uniformed microstructure guarantees best possible fatigue limit. This kind of steel is especially suitable for dies with risk-breakage in regards to special shapes.

Advantage for customer:

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

LIFE-TIME OF TOOLS | REGRIND ADVICE

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



INFLUENCING FACTORS	FACTOR
Zinc coated sheet / stainless steel with foil / aluminium anodized	0,5 - 0,8
No sheet lubrication	0,4 - 0,6
Punch coating (TICN for stainless steel / T-MAX for zinc coated 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 temporing 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.

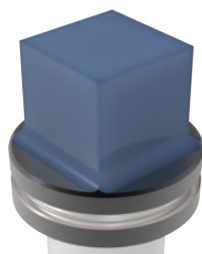
A high punch hardness as well as an excellent grinding surface are important in order to counteract the problem with edge-up.

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

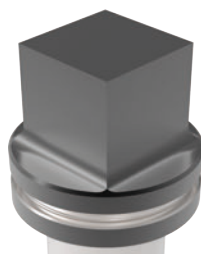
- zinc steel
- aluminium

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



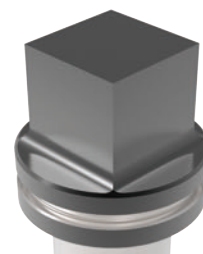
TiCN

for working with
stainless steel



A-MAX

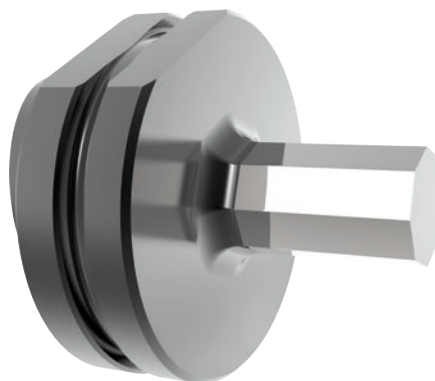
for dry processing with
aluminium sheet



T-MAX

for working with
galvanized sheet / zincor

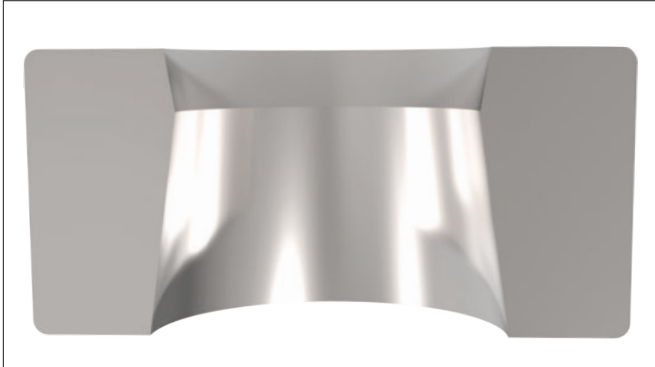
We recommend draw-polished punch edges to increase tool lifetime and reduce material build up (prices on request):



DIE VERSIONS

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

SLUG-STOP (STANDARD)



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

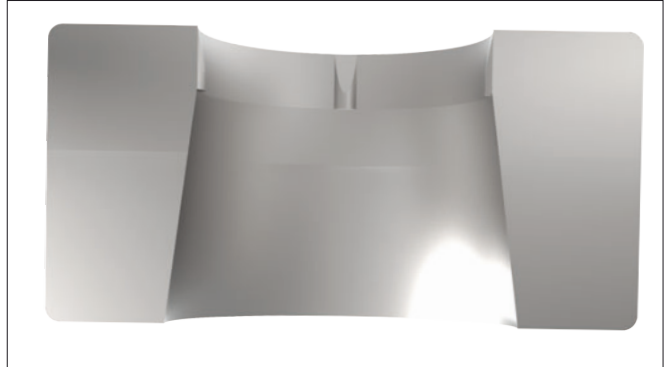
This means that the upper part of the cutting part is produced with a negative angle.

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)



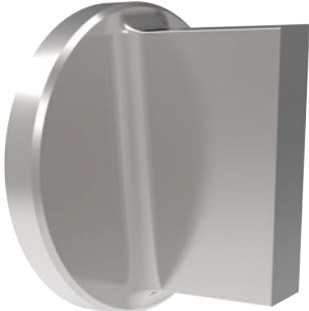
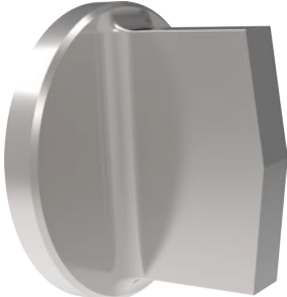
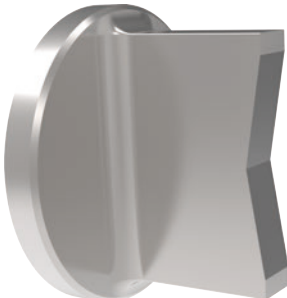
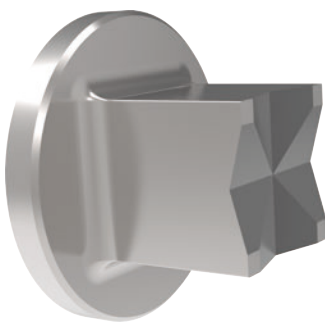
Alternatively we offer our slug-snap version (additional costs).

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
- clearance smaller 0,1 mm

PUNCHES WITH DIFFERENT SHEAR TYPES

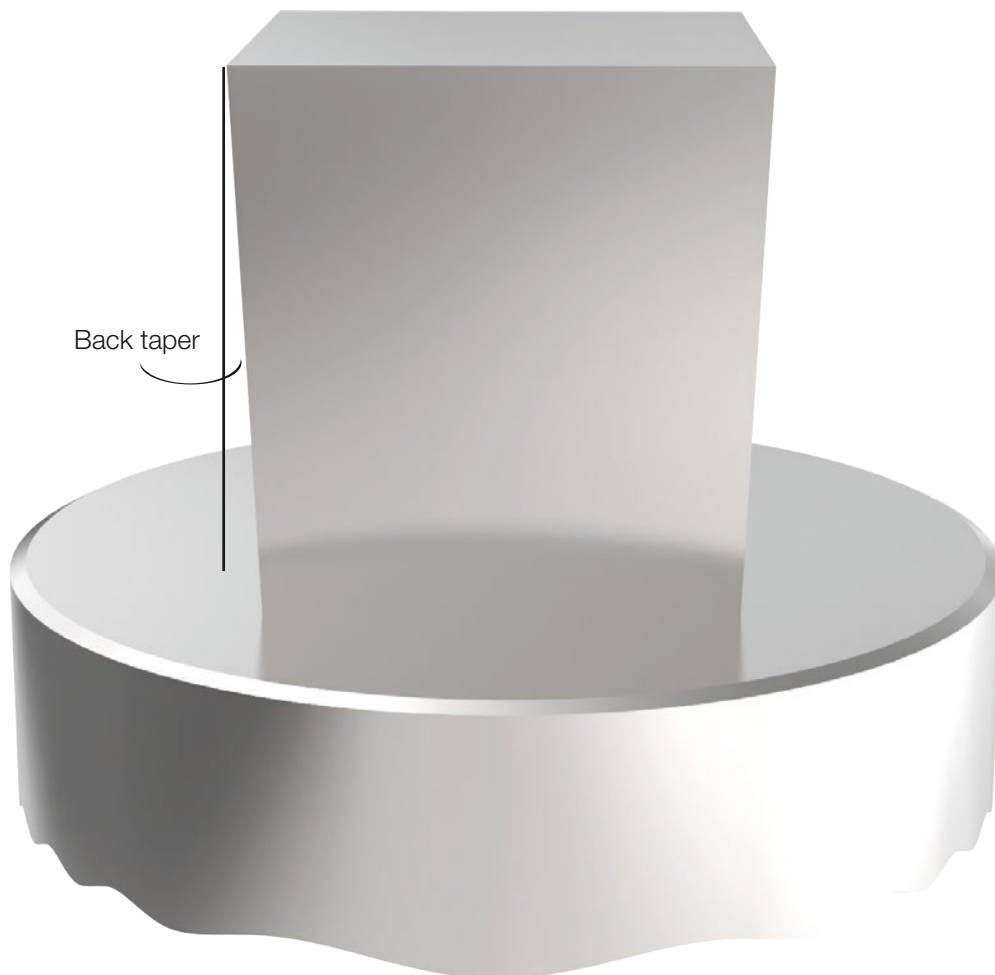
		DESCRIPTION
WT		WT Advantage easy regrindable Disadvantage lateral forces
DOWT		DOWT Advantages easy regrindable no lateral forces Disadvantage only reasonable for big shapes
2 PT		2 PT Advantages no lateral forces optimal die cutting Disadvantages only reasonable for big and slim shapes difficult to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

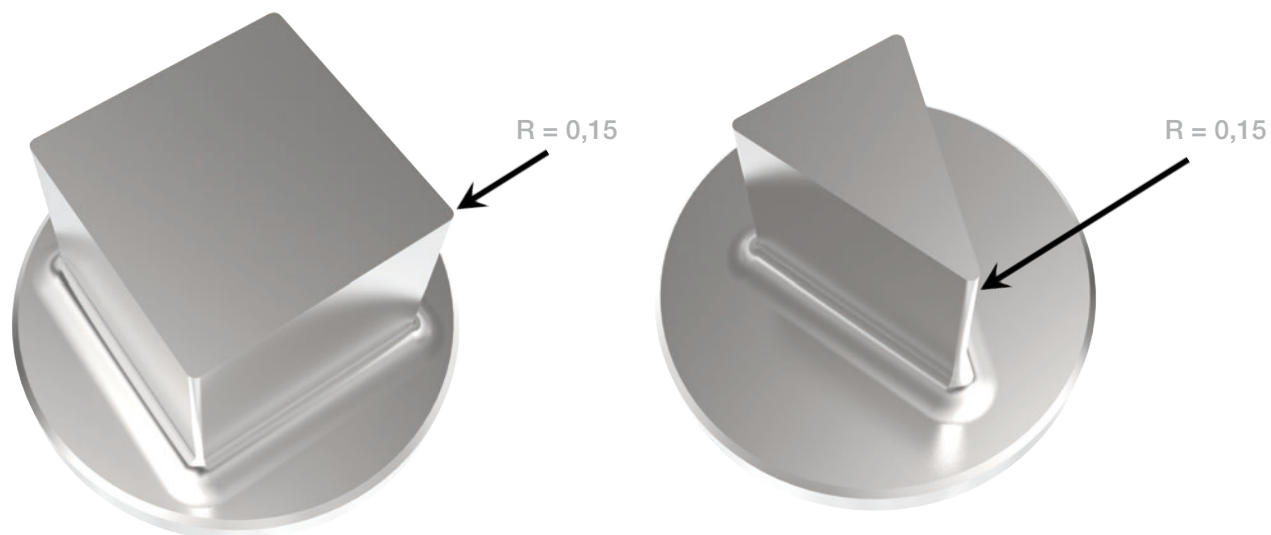
We recommend a line polished version for cutting parts, which have to be produced sink-eroded (special shape with internal shape, e.g. cross-form, U-form, etc.) and in high quality sheets.



PASS CORNER RADIUS ON PUNCHES

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

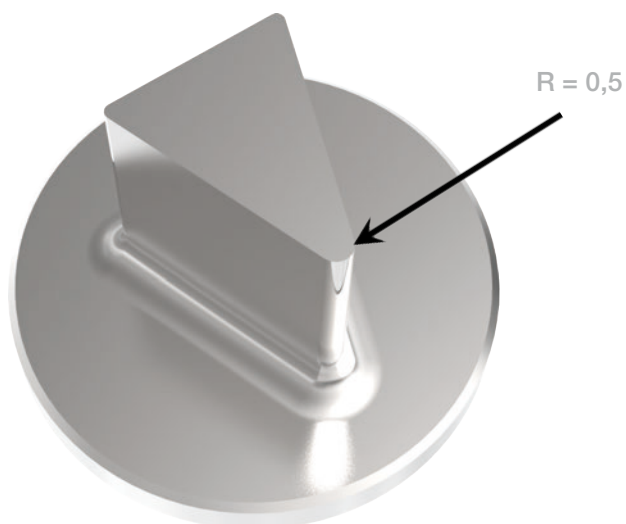
E.g.: square and triangle punch



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.



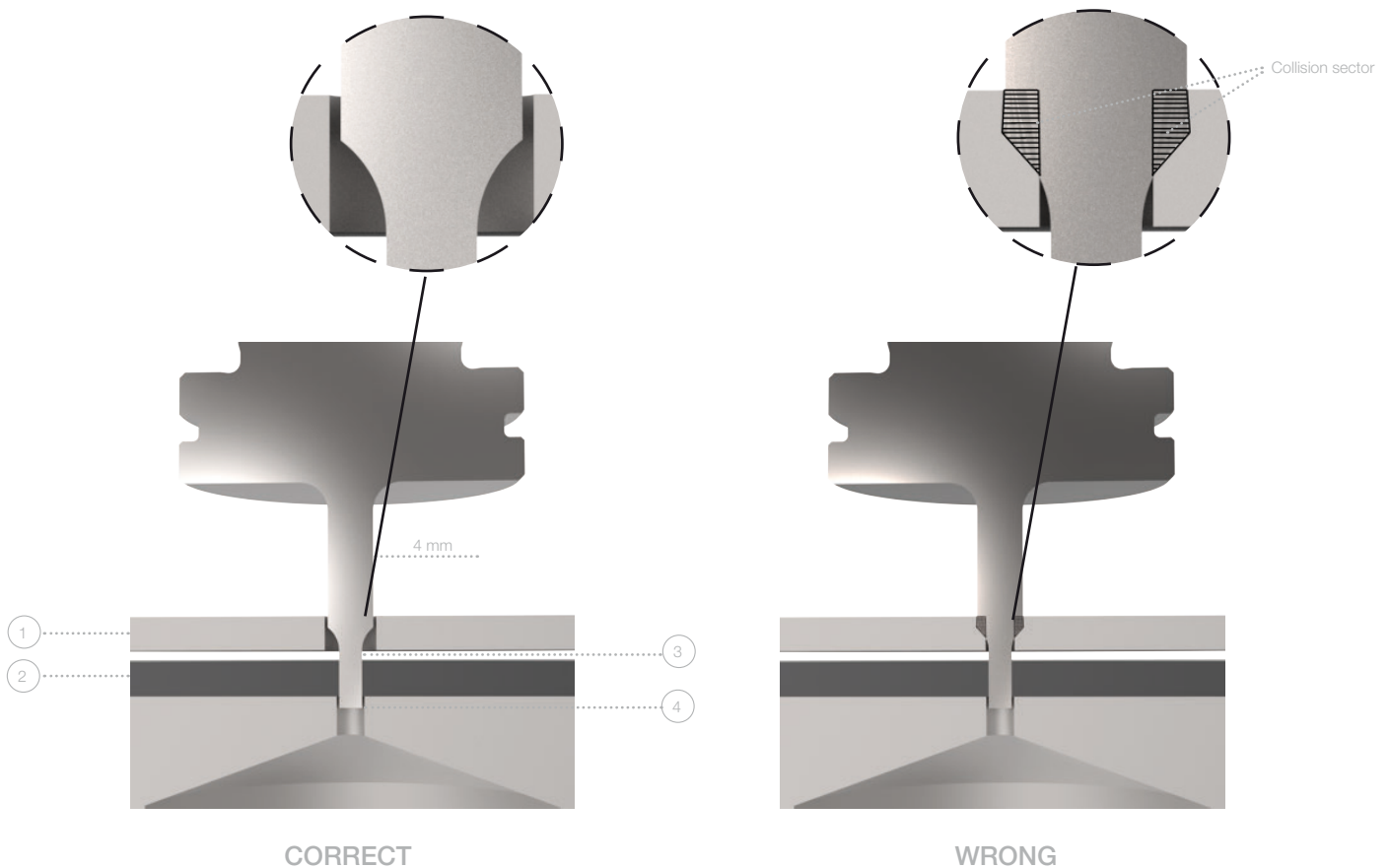
PASS PUNCHES WITH REINFORCED SHOULDER

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), immersion 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 squares, resembling graph paper, occupying the central portion of the page. The grid is composed of thin, light gray lines forming a uniform pattern of small squares.

A large grid of 20 columns and 40 rows for taking notes. The grid is composed of thin, light gray lines forming a uniform pattern across the central area of the page.

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		X	
		X3-PM	
		Tool variety.....	84
		X8-PM	
		Tool variety.....	84

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