



CATALOG 02/2015-WW-A.1

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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PASS STANDARD I STATION A

DIAMETER UP TO 12,7 MM



HEAD UNIT

Hexagon head screw
for simply assembling of
the punch assembly

Spring
for sheet thickness up to 6mm

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
(higher hit counts)

Alignment pin for exact adjustment
(excludes round)



PUNCH GUIDE

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

Keyway:

Round: 0°

Square: 0-45°

Rect./ Oblong: 0-90-225°

asym. Shapes: 0-90-180-270°

Tool shape integrated in guide

PASS STANDARD I STATION A

DIAMETER UP TO 12,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4012A01	
Square	4012A02	
Rectangle	4012A03	
Oblong	4012A04	
*O.D. Ground Special Shapes	4012A0G	
* EDM Required Special Shapes	4012A0E	
HEAD UNIT (HEAD SCREW, SPRING, DISTANCE RING)		
for all shapes	4092A01	
PUNCH BODY (H-PM®)		
Round	4022A01	
Square	4022A02	
Rectangle	4022A03	
Oblong	4022A04	
*O.D. Ground Special Shapes	4022A0G	
* EDM Required Special Shapes	4022A0E	
PUNCH GUIDE		
Round	4032A01	
Square	4032A02	
Rectangle	4032A03	
Oblong	4032A04	
*O.D. Ground Special Shapes	4032A0G	
* EDM Required Special Shapes	4032A0E	
DIE (HWS)		
Round	4052A01	
Square	4052A02	
Rectangle	4052A03	
Oblong	4052A04	
*O.D. Ground Special Shapes	4052A0G	
* EDM Required Special Shapes	4052A0E	



SPARE PARTS		ADDITIONAL COSTS FOR PUNCH
Head screw	4092A31	TiCN coating
Spring	4092A11	T-MAX coating
Distance ring	4092A21	WT-shear
O-Ring (in punch guide)	4092A51	DOWT-shear
PU-ejector Ø 3x6 (in punch)	4092P03	2 PT-shear
PU-ejector Ø 6x10 (in punch)	4092P06	4 PT-shear
COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Piece (2 mm)	499A4S2	Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE
1x0,4 mm/1x0,8 mm/1x1,2 mm dick	499A1M1	Reinforced die
Shimkeeper (0,5 mm)	499A1M95	H-PM® Quality

PASS ALPHA I STATION A

DIAMETER UP TO 12,7 MM



HEAD UNIT

Canister
for sheet thickness up to 4mm

Continuously and easy length adjustment in
assembled status



PUNCH BODY

Metric-thread M12 x 1,25

Punch body made with premium H-PM
(higher hit counts)

Alignment pin for exact adjustment
(excludes round)



PUNCH GUIDE

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

Keyway:
all shapes: 0 - 90°

STRIPPER

Interchangeable stripper plate

PASS ALPHA I STATION A

DIAMETER UP TO 12,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4013A01	
Square	4013A02	
Rectangle	4013A03	
Oblong	4013A04	
*O.D. Ground Special Shapes	4013A0G	
*EDM Required Special Shapes	4013A0E	
HEAD UNIT		
for all shapes	4093A01	
PUNCH BODY (H-PM®)		
Round	4023A01	
Square	4023A02	
Rectangle	4023A03	
Oblong	4023A04	
*O.D. Ground Special Shapes	4023A0G	
*EDM Required Special Shapes	4023A0E	
PUNCH GUIDE		
for all shapes	4033A05	
STRIPPER		
Round	4043A01	
Square	4043A02	
Rectangle	4043A03	
Oblong	4043A04	
*O.D. Ground Special Shapes	4043A0G	
*EDM Required Special Shapes	4043A0E	
DIE (HWS)		
Round	4052A01	
Square	4052A02	
Rectangle	4052A03	
Oblong	4052A04	
*O.D. Ground Special Shapes	4052A0G	
*EDM Required Special Shapes	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	WT-shear	
		DOWT-shear	
		2 PT-shear	
		4 PT-shear	
COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	Reinforced die	
Shimkeeper (0,5 mm)	499A1M95	H-PM® Quality	

PASS ALPHA-COMPACT I STATION A

DIAMETER UP TO 12,7 MM



HEAD UNIT

Canister
for sheet thickness up to 4mm

Continuously and easy length adjustment in
assembled status



PUNCH BODY

Metric-thread M12 x 1,25

Punch body made with premium HSS
(higher hit counts)

Alignment pin for exact adjustment
(excludes round)



PUNCH GUIDE

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

Keyway:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-90-225°

asym. Shapes: 0-90-180-270°

Tool shape integrated in guide

PASS ALPHA-COMPACT I STATION A

DIAMETER UP TO 12,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4017A01	
Square	4017A02	
Rectangle	4017A03	
Oblong	4017A04	
*O.D. Ground Special Shapes	4017A0G	
*EDM Required Special Shapes	4017A0E	
HEAD UNIT		
for all shapes	4093A01	
PUNCH BODY (H-PM®)		
Round	4023A01	
Square	4023A02	
Rectangle	4023A03	
Oblong	4023A04	
*O.D. Ground Special Shapes	4023A0G	
*EDM Required Special Shapes	4023A0E	
PUNCH GUIDE		
Round	4032A01	
Square	4032A02	
Rectangle	4032A03	
Oblong	4032A04	
*O.D. Ground Special Shapes	4032A0G	
*EDM Required Special Shapes	4032A0E	
DIE (HWS)		
Round	4052A01	
Square	4052A02	
Rectangle	4052A03	
Oblong	4052A04	
*O.D. Ground Special Shapes	4052A0G	
*EDM Required Special Shapes	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	WT-shear	
		DOWT-shear	
		2 PT-shear	
		4 PT-shear	
COMPANSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	
COMPANSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	Reinforced die	
Shimkeeper (0,5 mm)	499A1M95	H-PM® Quality	

PASS BETA-V2[®] | STATION A

DIAMETER UP TO 12,7 MM



HEAD UNIT

Canister
for sheet thickness up to 6mm

Spring

10 mm length adjustment by thread

Oil channel for tool lubrication

Suitable for PDC-system



PUNCH BODY

Oil channel for tool lubrication

Alignment pin for exact adjustment
(round version included)

punch body made with premium HSS
(higher hit counts)



PUNCH GUIDE

Simple length adjustment in assembled state
by pressing the locking button

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

Keyway:
all shapes: 0 - 90 - 225°

STRIPPER

interchangeable stripper plate

PASS BETA-V2[®] | STATION A

DIAMETER UP TO 12,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4010A01	
Square	4010A02	
Rectangle	4010A03	
Oblong	4010A04	
*O.D. Ground Special Shapes	4010A0G	
*EDM Required Special Shapes	4010A0E	
HEAD UNIT		
for all shapes	4090A10	
PUNCH BODY (H-PM[®])		
Round	4020A01	
Square	4020A02	
Rectangle	4020A03	
Oblong	4020A04	
*O.D. Ground Special Shapes	4020A0G	
*EDM Required Special Shapes	4020A0E	
PUNCH GUIDE		
for all shapes	4030A05	
STRIPPER		
Round	4040A01	
Square	4040A02	
Rectangle	4040A03	
Oblong	4040A04	
*O.D. Ground Special Shapes	4040A0G	
*EDM Required Special Shapes	4040A0E	
DIE (HWS)		
Round	4052A01	
Square	4052A02	
Rectangle	4052A03	
Oblong	4052A04	
*O.D. Ground Special Shapes	4052A0G	
*EDM Required Special Shapes	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	WT-shear	
		DOWT-shear	
		2 PT-shear	
		4 PT-shear	
COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	Reinforced die	
Shimkeeper (0,5 mm)	499A1M95	H-PM [®] Quality	

PASS BETA-COMPACT I STATION A

DIAMETER UP TO 12,7 MM



HEAD UNIT

Canister
for sheet thickness up to 6mm

Spring

10 mm length adjustment by thread

Oil channel for tool lubrication



PUNCH BODY

Oil channel for tool lubrication

Alignment pin for exact adjustment
(round version included)

Punch body made with premium H-PM
(higher hit counts)



PUNCH GUIDE

Simple length adjustment in assembled state
by pressing the locking button

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

Keyway:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-90-225°

asym. Shapes: 0-90-180-270°

Tool shape integrated in guide

PASS BETA-COMPACT I STATION A

DIAMETER UP TO 12,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4016A01	
Square	4016A02	
Rectangle	4016A03	
Oblong	4016A04	
*O.D. Ground Special Shapes	4016A0G	
*EDM Required Special Shapes	4016A0E	
HEAD UNIT		
for all shapes	4094A10	
PUNCH BODY (H-PM®)		
Round	4024A01	
Square	4024A02	
Rectangle	4024A03	
Oblong	4024A04	
*O.D. Ground Special Shapes	4024A0G	
*EDM Required Special Shapes	4024A0E	
PUNCH GUIDE		
Round	4036A01	
Square	4036A02	
Rectangle	4036A03	
Oblong	4036A04	
*O.D. Ground Special Shapes	4036A0G	
*EDM Required Special Shapes	4036A0E	
DIE (HWS)		
Round	4052A01	
Square	4052A02	
Rectangle	4052A03	
Oblong	4052A04	
*O.D. Ground Special Shapes	4052A0G	
*EDM Required Special Shapes	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	WT-shear	
		DOWT-shear	
		2 PT-shear	
		4 PT-shear	
COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499A1M1	Reinforced die	
Shimkeeper (0,5 mm)	499A1M95	H-PM® Quality	

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 6mm

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
(higher hit counts)

Alignment pin for exact adjustment
(excludes round)



PUNCH GUIDE

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

Keyway:
Round: 0°
Square: 0-45°
Rect./Oblong: 0-90-225°
asym. Shapes: 0-90-180-270°

Tool shape integrated in guide

PASS STANDARD I STATION B

DIAMETER UP TO 31,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4012B01	
Square	4012B02	
Rectangle	4012B03	
Oblong	4012B04	
*O.D. Ground Special Shapes	4012B0G	
*EDM Required Special Shapes	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 Shapes	4022B0G	
*EDM Required Special Shapes	4022B0E	
PUNCH GUIDE		
Round	4032B01	
Square	4032B02	
Rectangle	4032B03	
Oblong	4032B04	
*O.D. Ground Special Shapes	4032B0G	
*EDM Required Special Shapes	4032B0E	
DIE (HWS)		
Round	4052B01	
Square	4052B02	
Rectangle	4052B03	
Oblong	4052B04	
*O.D. Ground Special Shapes	4052B0G	
*EDM Required Special Shapes	4052B0E	



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

PASS ALPHA I STATION B

DIAMETER UP TO 31,7 MM



HEAD UNIT

Canister
for sheet thickness up to 4mm

Continuously and easy length adjustment
in assembled status



PUNCH BODY

Metric-thread M20 x 1,5

Punch body made with premium H-PM
(higher hit counts)

Alignment pin for exact adjustment
(excludes round)



PUNCH GUIDE

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

Keyway:
all shapes: 0 - 45 - 90 - 180 - 270°

STRIPPER

Interchangeable stripper plate

PASS ALPHA I STATION B

DIAMETER UP TO 31,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4013B01	
Square	4013B02	
Rectangle	4013B03	
Oblong	4013B04	
*O.D. Ground Special Shapes	4013B0G	
*EDM Required Special Shapes	4013B0E	
HEAD UNIT		
for all shapes	4093B01	
PUNCH BODY (H-PM®)		
Round	4023B01	
Square	4023B02	
Rectangle	4023B03	
Oblong	4023B04	
*O.D. Ground Special Shapes	4023B0G	
*EDM Required Special Shapes	4023B0E	
PUNCH GUIDE		
for all shapes	4033B05	
STRIPPER		
Round	4043B01	
Square	4043B02	
Rectangle	4043B03	
Oblong	4043B04	
*O.D. Ground Special Shapes	4043B0G	
*EDM Required Special Shapes	4043B0E	
DIE (HWS)		
Round	4052B01	
Square	4052B02	
Rectangle	4052B03	
Oblong	4052B04	
*O.D. Ground Special Shapes	4052B0G	
*EDM Required Special Shapes	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	WT-shear	
		DOWT-shear	
		2 PT-shear	
		4 PT-shear	
COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	Reinforced die	
Shimkeeper (0,5 mm)	499B1M95	H-PM® Quality	

PASS ALPHA-COMPACT I STATION B

DIAMETER UP TO 31,7 MM



HEAD UNIT

Canister
for sheet thickness up to 4mm

Continuously and easy length adjustment
in assembled status



PUNCH BODY

Metric-thread M20x 1,5

Punch body made with premium H-PM

Alignment pin for exact adjustment
(excludes round)



PUNCH GUIDE

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

Keyway:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-45-90-135°

asym. Shapes: 0-90-180-270°

Tool shapes integrated in guide

PASS ALPHA-COMPACT I STATION B

DIAMETER UP TO 31,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4017B01	
Square	4017B02	
Rectangle	4017B03	
Oblong	4017B04	
*O.D. Ground Special Shapes	4017B0G	
*EDM Required Special Shapes	4017B0E	
HEAD UNIT		
for all shapes	4093B01	
PUNCH BODY (H-PM®)		
Round	4023B01	
Square	4023B02	
Rectangle	4023B03	
Oblong	4023B04	
*O.D. Ground Special Shapes	4023B0G	
*EDM Required Special Shapes	4023B0E	
PUNCH GUIDE		
Round	4032B01	
Square	4032B02	
Rectangle	4032B03	
Oblong	4032B04	
*O.D. Ground Special Shapes	4032B0G	
*EDM Required Special Shapes	4032B0E	
DIE (HWS)		
Round	4052B01	
Square	4052B02	
Rectangle	4052B03	
Oblong	4052B04	
*O.D. Ground Special Shapes	4052B0G	
*EDM Required Special Shapes	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	WT-shear	
		DOWT-shear	
		2 PT-shear	
		4 PT-shear	
COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	Reinforced die	
Shimkeeper (0,5 mm)	499B1M95	H-PM® Quality	

PASS BETA-V2[®] | STATION B

DIAMETER UP TO 31,7 MM



HEAD UNIT

Canister
for sheet thickness up to 6mm

Spring

10 mm length adjustment by thread

Oil channel for tool lubrication

Suitable for PDC-system



PUNCH BODY

Oil channel for tool lubrication

Alignment pin for exact adjustment
(round version included)

punch body made with premium H-PM
(higher hit counts)



PUNCH GUIDE

Simple length adjustment in assembled state
by pressing the locking button

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

Keyway:
all shapes: 0 - 90 - 225°

STRIPPER

Interchangeable stripper plate

PASS BETA-V2[®] I STATION B

DIAMETER UP TO 31,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4010B01	
Square	4010B02	
Rectangle	4010B03	
Oblong	4010B04	
*O.D. Ground Special Shapes	4010B0G	
* EDM Required Special Shapes	4010B0E	
HEAD UNIT		
for all shapes	4090B10	
PUNCH BODY (H-PM[®])		
Round	4020B01	
Square	4020B02	
Rectangle	4020B03	
Oblong	4020B04	
*O.D. Ground Special Shapes	4020B0G	
* EDM Required Special Shapes	4020B0E	
PUNCH GUIDE		
for all shapes	4030B05	
STRIPPER		
Round	4040B01	
Square	4040B02	
Rectangle	4040B03	
Oblong	4040B04	
*O.D. Ground Special Shapes	4040B0G	
* EDM Required Special Shapes	4040B0E	
DIE (HWS)		
Round	4052B01	
Square	4052B02	
Rectangle	4052B03	
Oblong	4052B04	
*O.D. Ground Special Shapes	4052B0G	
* EDM Required Special Shapes	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	WT-shear	
		DOWT-shear	
		2 PT-shear	
		4 PT-shear	
COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	Reinforced die	
Shimkeeper (0,5 mm)	499B1M95	H-PM [®] Quality	

PASS BETA-COMPACT I STATION B

DIAMETER UP TO 31,7 MM



HEAD UNIT

Canister
for sheet thickness up to 6mm

Spring

10 mm length adjustment by thread

Oil channel for tool lubrication



PUNCH BODY

Oil channel for tool lubrication

Alignment pin for exact adjustment
(round version included)

Punch body made with premium H-PM
(higher hit counts)



PUNCH GUIDE

Simple length adjustment in assembled state
by pressing the locking button.

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

Keyway:

Round: 0°

Square: 0-45°

Rect./Oblong: 0-90-225°

asym. Shapes: 0-90-180-270°

Tool shape integrated in guide

PASS BETA-COMPACT I STATION B

DIAMETER UP TO 31,7 MM

	PART-NO.	PRICE IN €
COMPLETE PUNCH ASSEMBLY		
Round	4016B01	
Square	4016B02	
Rectangle	4016B03	
Oblong	4016B04	
*O.D. Ground Special Shapes	4016B0G	
*EDM Required Special Shapes	4016B0E	
HEAD UNIT		
for all shapes	4094B10	
PUNCH BODY (H-PM®)		
Round	4024B01	
Square	4024B02	
Rectangle	4024B03	
Oblong	4024B04	
*O.D. Ground Special Shapes	4024B0G	
*EDM Required Special Shapes	4024B0E	
PUNCH GUIDE		
Round	4036B01	
Square	4036B02	
Rectangle	4036B03	
Oblong	4036B04	
*O.D. Ground Special Shapes	4036B0G	
*EDM Required Special Shapes	4036B0E	
DIE (HWS)		
Round	4052B01	
Square	4052B02	
Rectangle	4052B03	
Oblong	4052B04	
*O.D. Ground Special Shapes	4052B0G	
*EDM Required Special Shapes	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	WT-shear	
		DOWT-shear	
		2 PT-shear	
		4 PT-shear	
COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499B1M1	Reinforced die	
Shimkeeper (0,5 mm)	499B1M95	H-PM® Quality	

PASS STANDARD I STATION C

DIAMETER UP TO 50,8 MM



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6mm

3 mm length adjustment
by using compensating shims

Keyway: 0 - 90°

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

Clamping-screws 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	

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

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

DIE (HWS)		
Round	4052C01	
Square	4052C02	
Rectangle	4052C03	
Oblong	4052C04	
*O.D. Ground Special Shapes	4052C0G	
* EDM Required Special Shapes	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	WT-shear
Guiding key with screws	499C63	DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
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 DIE
1x0,4 mm/1x0,8 mm/1x1,2 mm	499C2M1	H-PM® Quality

PASS BETA-V2[®] | STATION C

DIAMETER UP TO 50,8 MM



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6mm

Oil channel for tool lubrication

Simple 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 6mm

Fast and easy clamping system for stripper

Suitable for PDC-system

PUNCH BODY

Thread M12 with oil channel for tool lubrication

Punch body made with premium H-PM (higher hit counts)

STRIPPER

Interchangeable stripper plate

PASS BETA-V2® I STATION C

DIAMETER UP TO 50,8 MM

	PART-NO.	PRICE IN €
GUIDE ASSEMBLY		
for all shapes	4030C01	

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

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

DIE (HWS)		
Round	4052C01	
Square	4052C02	
Rectangle	4052C03	
Oblong	4052C04	
*O.D. Ground Special Shapes	4052C0G	
* EDM Required Special Shapes	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
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE
1x0,4 mm/1x0,8 mm/1x1,2 mm	499C2M1	H-PM® Quality

PASS BETA-V2® SLITTING TOOL I STATION C



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6mm

Oil channel for tool 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 6mm

Fast and easy clamping system for stripper

Suitable for PDC-system

SLITTING TOOL ADAPTER

2 fixing threads M6

Thread M12 with oil channel for tool lubrication

SLITTING TOOL

Punch body made with premium H-PM
(higher hit counts)

STRIPPER

Interchangeable stripper plate

PASS BETA-V2® SLITTING TOOL I STATION C

	PART-NO.	PRICE IN €
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
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
COMPENSATING SHIMS FOR SLITTING TOOL ADAPTER		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR REVERSIBLE PLATE		
1x0,4 mm/1x0,8 mm/1x1,2 mm	499CT60	

PASS STANDARD I STATION D

DIAMETER UP TO 88,9 MM



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6mm

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
(higher hit counts)

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	

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

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

DIE (HWS)		
Round	4052D01	
Square	4052D02	
Rectangle	4052D03	
Oblong	4052D04	
*O.D. Ground Special Shapes	4052D0G	
* EDM Required Special Shapes	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	WT-shear
Guiding key with screws	499D63	DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway

SET OF COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH
1x0,4 mm/1x0,8 mm/1x1,2 mm	499D3S1	Additional keyway

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

PASS BETA-V2[®] | STATION D

DIAMETER UP TO 88,9 MM



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6mm

Oil channel for tool lubrication

Simple 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

Suitable for PDC-system



PUNCH BODY

Thread M12 with oil channel for tool lubrication

Punch body made with premium H-PM (higher hit counts)

STRIPPER

Interchangeable stripper plate

PASS BETA-V2[®] I STATION D

DIAMETER UP TO 88,9 MM

	PART-NO.	PRICE IN €
GUIDE ASSEMBLY		
for all shapes	4030D01	

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

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

DIE (HWS)		
Round	4052D01	
Square	4052D02	
Rectangle	4052D03	
Oblong	4052D04	
*O.D. Ground Special Shapes	4052D0G	
*EDM Required Special Shapes	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
		WT-coating
		DOW-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE
1x0,4 mm/1x0,8 mm/1x1,2 mm	499D2M1	H-PM [®] Quality

PASS BETA-V2[®] SLITTING TOOL I STATION D



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6 mm

Oil channel for tool lubrication

Simple 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

Suitable for PDC-system

SLITTING TOOL ADAPTER

4 fixing threads M6

Thread M12 with oil channel for tool lubrication

SLITTING TOOL

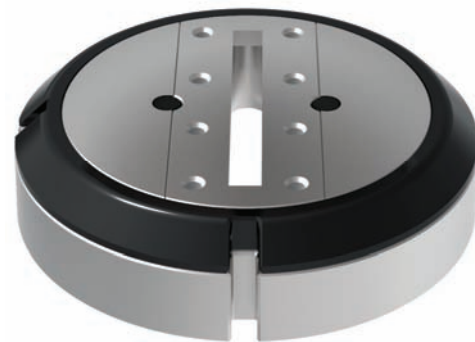
Punch body made with premium H-PM (higher hit counts)

STRIPPER

Interchangeable stripper plate

PASS BETA-V2[®] SLITTING TOOL I STATION D

	PART-NO.	PRICE IN €
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	
		WT-shear	
		DOWT-shear	
		2 PT-shear	
		4 PT-shear	
		Additional keyway	
COMPENSATING SHIMS FOR SLITTING TOOL ADAPTER		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	
SET OF COMPENSATING SHIMS FOR REVERSIBLE PLATE			
1x0,4 mm/1x0,8 mm/1x1,2 mm	499DT60		

PASS BETA-V2[®] SLITTING TOOL I STATION D

CLOSE TO CLAMP



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6mm

Oil channel for tool lubrication

Simple 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

Suitable for PDC-system

SLITTING TOOL ADAPTER

4 fixing threads M6

Thread M12 with oil channel for tool lubrication

SLITTING TOOL

Punch body made with premium H-PM (higher hit counts)

STRIPPER

Interchangeable stripper plate

One or two-sided relief for punching close to clamp



PASS BETA-V2[®] SLITTING TOOL I STATION D

CLOSE TO CLAMP

	PART-NO.	PRICE IN €
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

PU-ejector Ø 3x6 (in punch)	4092P03
PU-ejector Ø 6x10 (in punch)	4092P06

ADDITIONAL COSTS FOR PUNCH

TiCN coating
T-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear
Additional keyway

COMPENSATING SHIMS FOR SLITTING TOOL ADAPTER

Not necessary

ADDITIONAL COSTS FOR PUNCH GUIDE

Additional keyway

SET OF COMPENSATING SHIMS FOR DIE

1x0,4 mm/1x0,8 mm/1x1,2 mm	499D2M1
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ADDITIONAL COSTS FOR DIE

H-PM[®] Quality

PASS CLEAN CUT

FOR MACHINE TYPE THICK TURRET - STATION D

Function:

The PASS 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 PASS Clean Cut no witness marks are made and only smooth and clean cuts can be seen - without the need of additional rework.



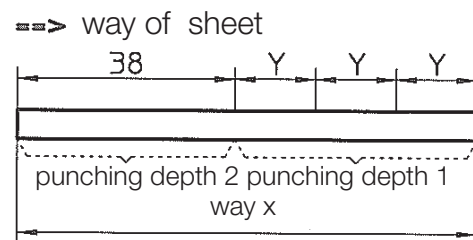
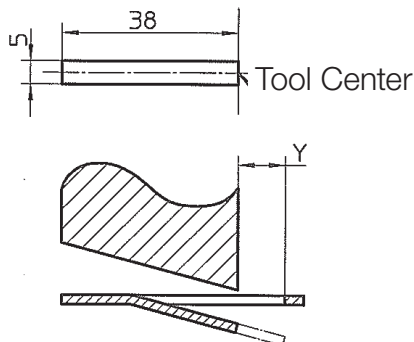
Functional principle of the tool:

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 ~60x60 mm to 100x100 mm) should be placed by hand onto the die. Afterwards the station has to be adjusted manually under the ram. After the test hit the station can be returned to changing position and the sheet can be removed.

Attention: Please don't 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 punching 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)

PASS CLEAN CUT

FOR MACHINE TYP THICK TURRET - STATION D

	PART-NO.	PRICE IN €
TOOL - COMPLETE		
	499110001	
UPPER PART - COMPLETE		
	499110001-1	
DIE - COMPLETE		
	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.	199110001-3	
Slitting plate - top	199110140	
Slitting plate - bottom	199110150	
Set springs for die plate (4x)	199110903	
Set shoulder screws for die plate (4x)	199110904	



TECHNICAL INFORMATION

Aluminium:	0,5 - 1,2 mm (tool direction: 16 mm)
Steel:	0,5 - 1,2 mm (tool direction: 16 mm)
Inox:	0,5 - 1,2 mm (tool direction: 16 mm)
Aluminium:	1,25 - 1,5 mm (tool direction: 12 mm)
Steel:	1,25 - 1,5 mm (tool direction: 12 mm)
Aluminium:	1,6 - 2,0 mm (tool direction: 10 mm)

ADDITIONAL COSTS FOR SLITTING BLADE

TICN coating (for Inox-sheet)
A-MAX coating (for Aluminium sheet)
T-MAX coating (for Zinc steel)

ADDITIONAL COSTS FOR STRIPPER

Polished version for low-scratch material handling

MAX. REGRINDING LENGTH

Punch: (Lmin = 201,5 mm)	7 mm
Die plate: (Hmin = 33,5 mm)	0,5 mm

ADDITIONAL COSTS FOR DIE PLATE

Polished version for low-scratch material handling

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-screws to fix the strippers

PUNCH BODY

Thread M12

Punch body made with premium H-PM
(higher hit counts)

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	

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

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

DIE (HWS)		
Round	4052E01	
Square	4052E02	
Rectangle	4052E03	
Oblong	4052E04	
*O.D. Ground Special Shapes	4052E0G	
*EDM Required Special Shapes	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	WT-shear
Guiding key with screws	499E63	DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
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 DIE
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E2M1	H-PM® Quality

PASS 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 tool lubrication

Simple 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

Suitable for PDC-system

PUNCH BODY

Thread M12 with oil channel

Punch body made with premium H-PM (higher hit counts)

STRIPPER

Interchangeable stripper plate

PASS BETA-V2® | STATION E

DIAMETER UP TO 114,3 MM

	PART-NO.	PRICE IN €
GUIDE ASSEMBLY		
for all shapes	4030E01	

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

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

DIE (HWS)		
Round	4052E01	
Square	4052E02	
Rectangle	4052E03	
Oblong	4052E04	
*O.D. Ground Special Shapes	4052E0G	
*EDM Required Special Shapes	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	
		WT-shear	
		DOWT-shear	
		2 PT-shear	
		4 PT-shear	
		Additional keyway	
COMPENSATING SHIMS FOR PUNCH		ADDITIONAL COSTS FOR PUNCH GUIDE	
Not necessary		Additional keyway	
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE	
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E2M1	45,10	H-PM® Quality

PASS BETA-V2® SLITTING TOOL | STATION E



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6 mm

Oil channel for tool lubrication

Simple 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

Suitable for PDC-system

SLITTING TOOL ADAPTER

4 fixing threads M6

Thread M12 with oil channel for tool lubrication

SLITTING TOOL

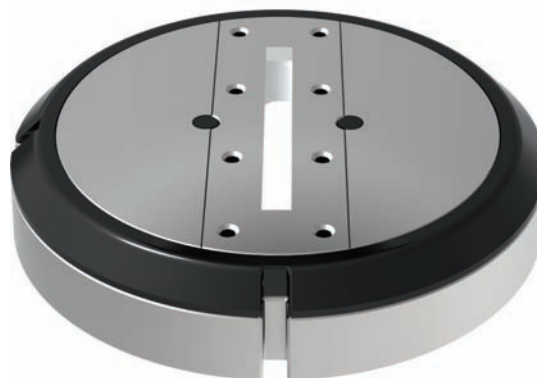
Punch body made with premium H-PM (higher hit counts)

STRIPPER

Interchangeable stripper plate

PASS BETA-V2[®] SLITTING TOOL I STATION E

	PART-NO.	PRICE IN €
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
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
COMPENSATING SHIMS FOR SLITTING TOOL ADAPTER		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR REVERSIBLE PLATE		
1x0,4 mm/1x0,8 mm/1x1,2 mm	499ET60	

PASS BETA-V2® SLITTING TOOL | STATION E CLOSE TO CLAMP



GUIDE ASSEMBLY

Screw M12

Springs for sheet thickness up to 6 mm

Oil channel for tool lubrication

Simple 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

Suitable for PDC-system

SLITTING TOOL ADAPTER

4 fixing threads M6

Thread M12 with oil channel for tool lubrication

SLITTING TOOL

Punch body made with premium H-PM (higher hit counts)

STRIPPER

Interchangeable stripper plate

One or two-sided relief for punching close to clamp

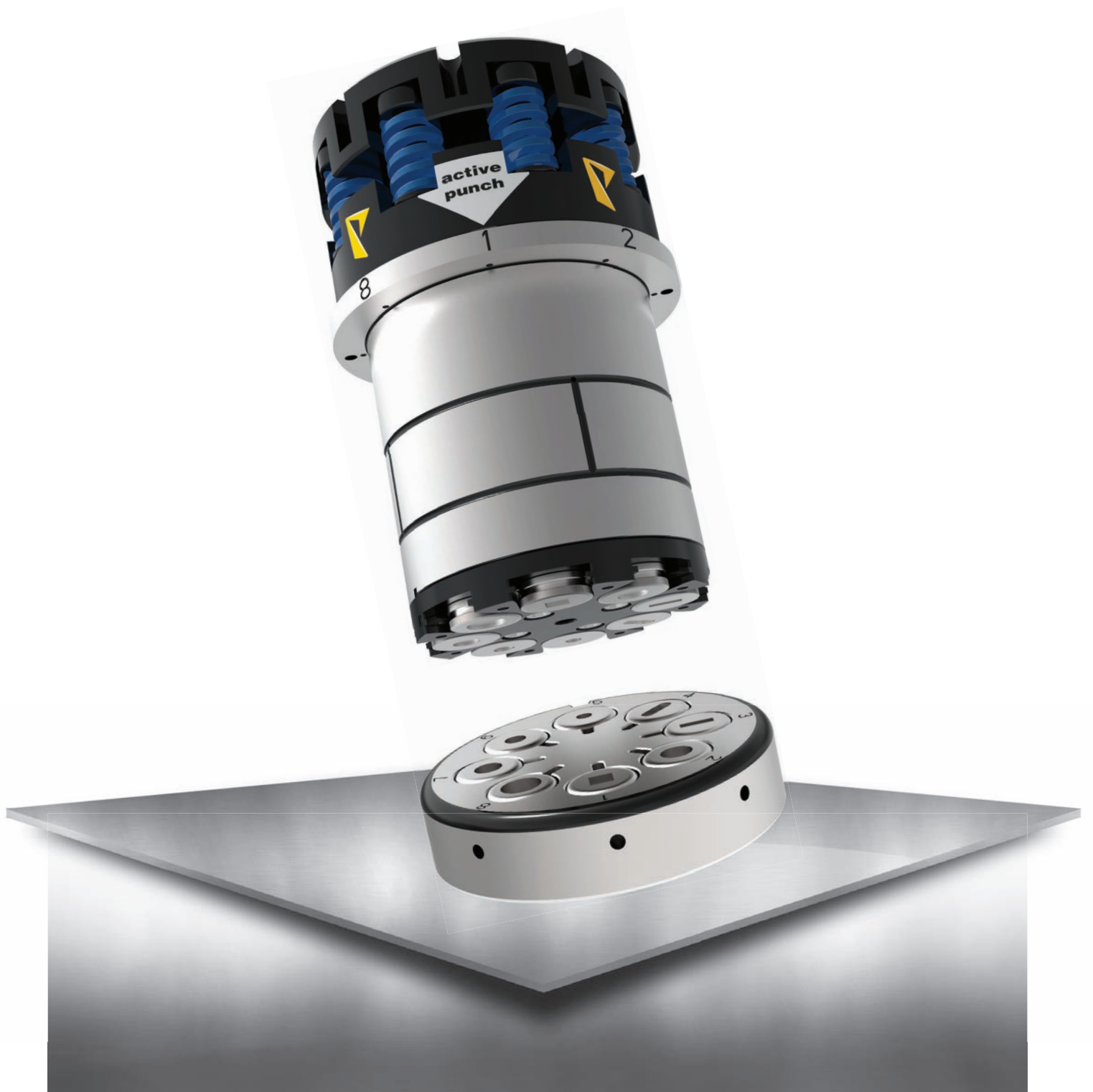


PASS BETA-V2[®] SLITTING TOOL I STATION E CLOSE TO CLAMP

	PART-NO.	PRICE IN €
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
		WT-shear
		DOWT-shear
		2 PT-shear
		4 PT-shear
		Additional keyway
COMPENSATING SHIMS FOR SLITTING TOOL ADAPTER		ADDITIONAL COSTS FOR PUNCH GUIDE
Not necessary		Additional keyway
SET OF COMPENSATING SHIMS FOR DIE		ADDITIONAL COSTS FOR DIE
1x0,4 mm/1x0,8 mm/1x1,2 mm	499E2M1	H-PM [®] Quality



PASS MULTITOOLS FOR YOUR FINN-POWER MACHINES

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PASS MT8Ri3-16 Multitool	Page 50 - 51
PASS MT3Ri3-31,75 Multitool	Page 52 - 53

MT8RI3-16 MULTITOOL I INSERTS

FOR MACHINE TYP FINN-POWER

SUITABLE FOR SHEET THICKNESS UP TO 6 MM*



	POS.-NR.	PART-NO.	PRICE IN €
PUNCH (1*)			
Round	1	413161-1	
Square	1	413162-1	
Rectangle	1	413163-1	
Oblong	1	413164-1	
*O.D. Ground Special Shapes	1	41316G-1	
*EDM Required Special Shapes	1	41316E-1	
PUNCH (2*)			
Head unit	2	450801800	
Set compensating shims (10 St.)	3	450801900	
Round	4	413161-2	
Square	4	413162-2	
Rectangle	4	413163-2	
Oblong	4	413164-2	
*O.D. Ground Special Shapes	4	41316G-2	
*EDM Required Special Shapes	4	41316E-2	
STRIPPER			
Round	5	415161	
Square	5	415162	
Rectangle	5	415163	
Oblong	5	415164	
*O.D. Ground Special Shapes	5	41516G	
*EDM Required Special Shapes	5	41516E	
8-STATION STRIPPER (3*)			
Optional - shape adaptable stripper	6	450802000	
DIE (HWS)			
Round	7	414161	
Square	7	414162	
Rectangle	7	414163	
Oblong	7	414164	
*O.D. Ground Special Shapes	7	41416G	
*EDM Required Special Shapes	7	41416E	

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(1*) One-piece punch (solid version) - max. sheet thickness:

Aluminium:	0,8 up to 6,0 mm
Steel (up to 420 n/mm ²):	0,5 up to 4,0 mm
Stainless steel:	0,5 up to 3,0 mm

(2*)P unchin seper ated version (for regrinding length up to 5mm) - max. sheet thickness:

Aluminium:	0,8 up to 3,0 mm
Steel (up to 420 n/mm ²):	0,5 up to 2,0 mm
Stainless steel:	0,5 up to 1,5 mm

(3*) 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)

ADDITIONAL COSTS FOR PUNCH

TiCN coating
T-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear

ADDITIONAL COSTS FOR DIE

Reinforced die
H-PM® Quality

MT8RI3-16 MULTITOOL I ADAPTER

FOR MACHINE TYP FINN-POWER
SUITABLE FOR SHEET THICKNESS UP TO 6 MM*

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



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*** max. sheet thickness:

Aluminium:	0,8 up to 6,0 mm
Steel (up to 420 n/mm ²):	0,5 up to 4,0 mm
Stainless steel:	0,5 up to 3,0 mm

Alternatively, one 8-Station stripper, adaptable to shape, can be used in order to avoid marks on the sheet surface (e.g. when using polished Alu)
(Price: 817,95 €)

MT3RI3-31,75 MULTITOOL I INSERTS

FOR MACHINE TYP FINN-POWER

SUITABLE FOR SHEET THICKNESS UP TO 6 MM*



POS.-NR.

PART-NO.

PRICE IN €

PUNCH			
Head unit	1	450301700	
Round	1	413191	
Square	1	413192	
Rectangle	1	413193	
Oblong	1	413194	
*O.D. Ground Special Shapes	1	41319G	
*EDM Required Special Shapes	1	41319E	

STRIPPER			
Round	2	415191	
Square	2	415192	
Rectangle	2	415193	
Oblong	2	415194	
*O.D. Ground Special Shapes	2	41519G	
*EDM Required Special Shapes	2	41519E	

3-STATION STRIPPER (1*)			
Optional - shape adaptable stripper		450302000	

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

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max. sheet thickness:

Aluminium:	0,8 up to 6,0 mm
Steel (up to 420 n/mm ²):	0,5 up to 4,0 mm
Stainless Steel:	0,5 up to 3,0 mm

ADDITIONAL COSTS FOR PUNCH

TICN coating
T-MAX coating
WT-shear
DOWT-shear
2 PT-shear
4 PT-shear

ADDITIONAL COSTS FOR DIE

Reinforced version
H-PM® Quality

(1*) 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).

MT3RI3-31,75 MULTITOOL I ADAPTER

FOR MACHINE TYPE FINN-POWER
SUITABLE FOR SHEET THICKNESS UP TO 6 MM*

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

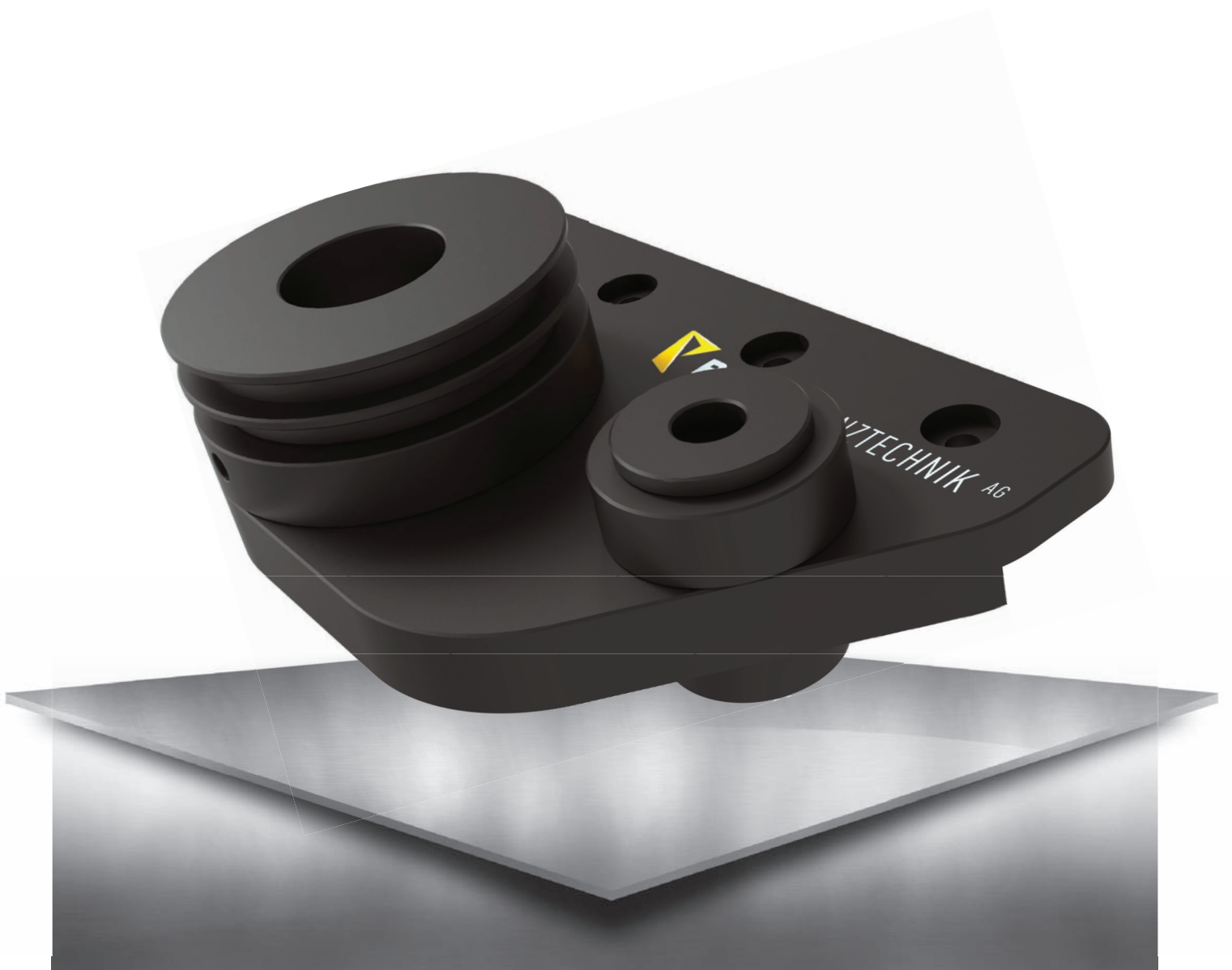


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*** max. sheet thickness:

Aluminium:	0,8 up to 6,0 mm
Steel (up to 420 n/mm ²):	0,5 up to 4,0 mm
Stainless Steel:	0,5 up to 3,0 mm

Alternatively, one 3-Station stripper, adaptable to shape, can be used in order to avoid marks on the sheet surface (e.g. when using polished Alu)



ACCESSORIES

PASS ACCESSORIES FOR YOUR
THICK TURRET SYSTEM

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PASS ASSEMBLY ADAPTER KIT

Station A



Station B



Station C



Station D



Station E



PART-NO.

PRICE IN €

COMPLETE SET ASSEMBLY KIT

Set consists of:	499M09SET
5 assembly adapter	
1 assembling plate	



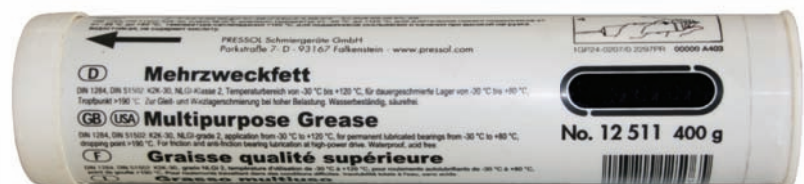
equipped plate with adapter

PASS ASSEMBLING SET

FOR PASS GUIDE ASSEMBLY / STAT. C, D, E AND FOR PASS MULTITool GUIDE ASSEMBLY / STAT.D

/ FOR PASS ps:multi-thread

	PART-NO.	PRICE IN €
ASSEMBLING SET - CONSISTING OF		
Torque wrench / 25-130Nm incl. 4 socket wrench SW 7 / 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.	PRICE IN €
MACHINE TYP: FINN-POWER & LVD			
Punch adapter	B/A	401BAS1	
Die adapter	B/A	401BAM1	
MACHINE TYP: 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	401DCM3	

PASS DIES (WITH BRUSH INSERTS)

	STATION	PART-NO.	PRICE IN €
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	





SPECIAL SHAPES

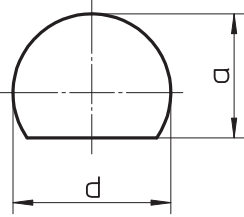
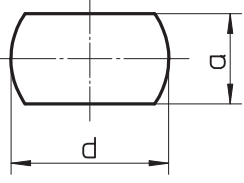
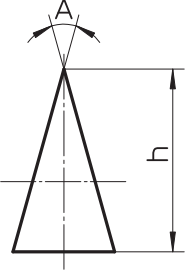
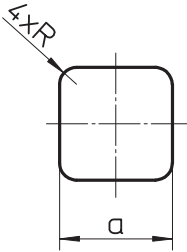
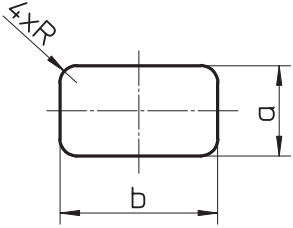
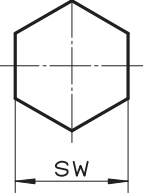
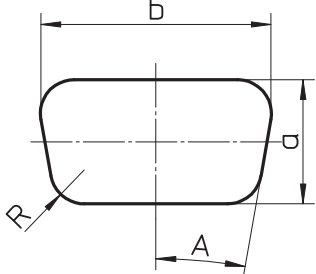
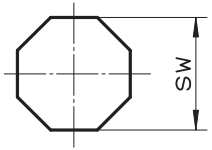
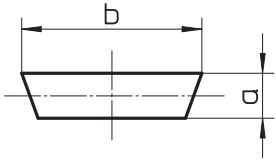
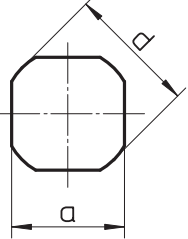
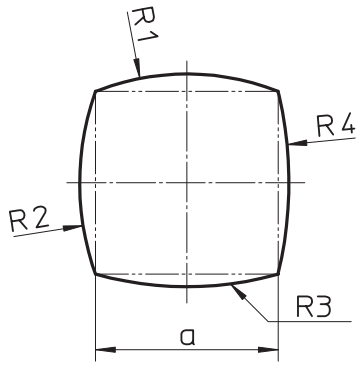
INFORMATION ABOUT OUR TOOLS
FOR YOUR THICK TURRET SYSTEM

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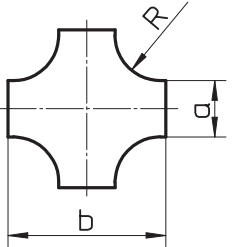
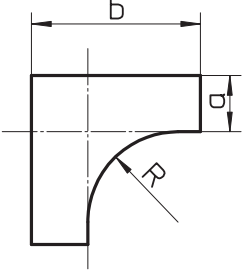
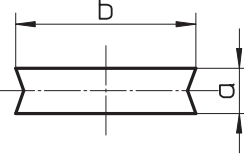
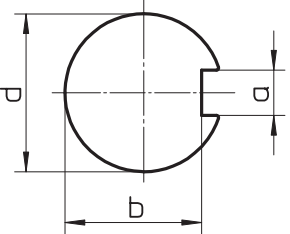
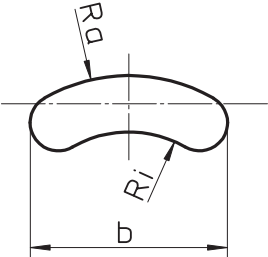
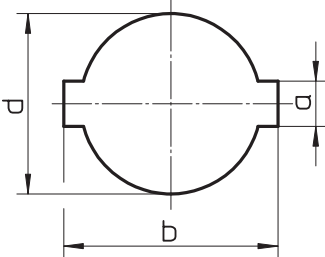
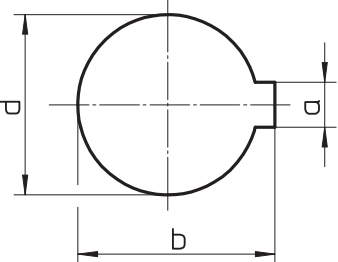
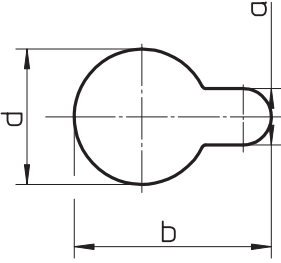
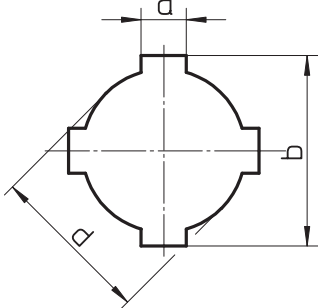
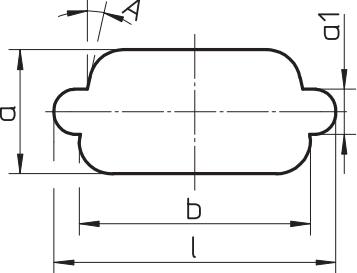
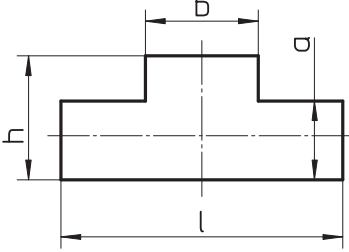
O.D. GROUND SPECIAL SHAPES

HK BIS 50,8 MM

 <p>G01</p>	 <p>G02</p>	 <p>G03</p>
 <p>G04</p>	 <p>G05</p>	 <p>G06</p>
 <p>G07</p>	 <p>G08</p>	 <p>G09</p>
 <p>G10</p>	 <p>G11</p>	

EDM REQUIRED SPECIAL SHAPES

HK BIS 50,8 MM

 <p>E01</p>	 <p>E02</p>	 <p>E03</p>
 <p>E04</p>	 <p>E05</p>	 <p>E06</p>
 <p>E07</p>	 <p>E08</p>	 <p>E09</p>
 <p>E10</p>	 <p>E11</p>	



FOR ALL THOSE, WHO LIKE TO UNDERSTAND EXACTLY

IMPORTANT INFORMATION ABOUT OUR TOOLS
FOR YOUR THICK TURRET SYSTEM

INDEX

Steel information	page 66
Life-time of tools / regrinding advice	page 67

PASS STEEL IDENTIFICATIONS

HWS

HWS is known as 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® steel is known as steel made on a 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 is known as 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 resistant 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

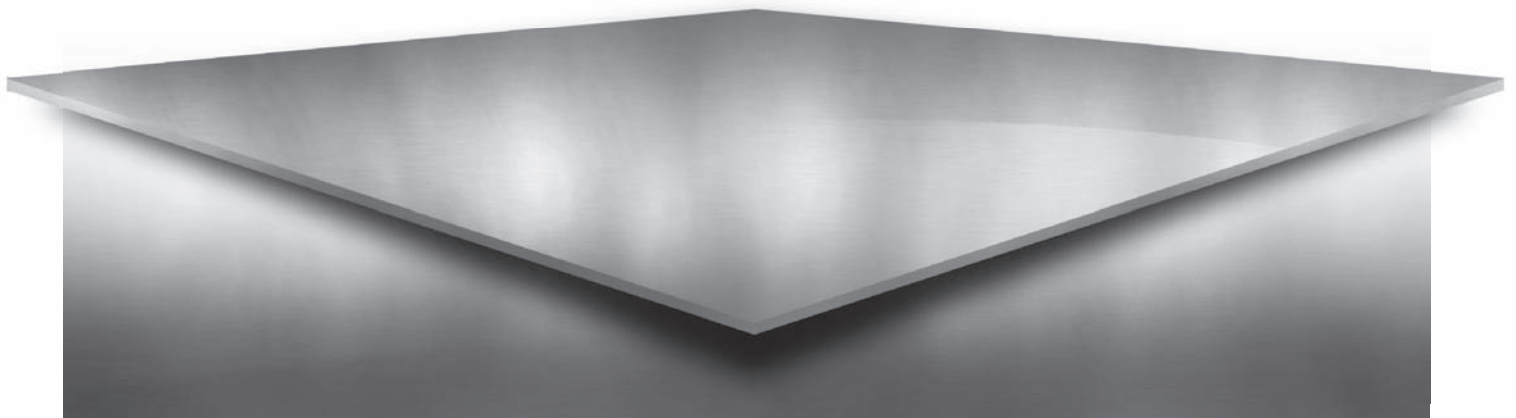
X8-PM

The X8-PM is known as 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 regards to special contours.

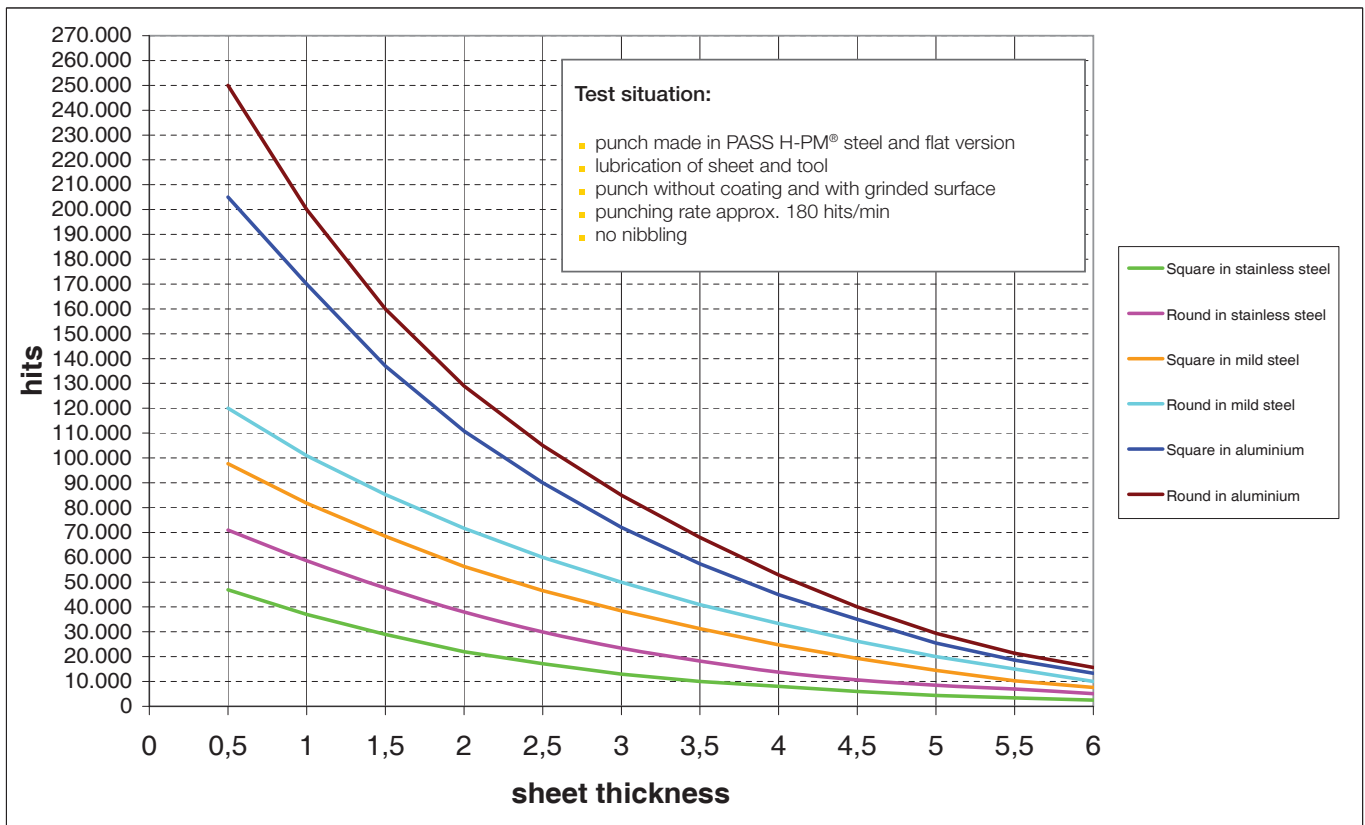
Advantage for customer:

- 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 / C-Max for copper)	2,0 - 4,0
PASS-punch made with special X3-PM steel	6,0 - 10,0
Nibbling	0,7 - 0,9
Corner-punching	0,5 - 0,7
Whisper Tool	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 close radius	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.

SALVAGNINI | **THICK TURRET** | **TRUMPF**



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 72 / 9 85 - 99