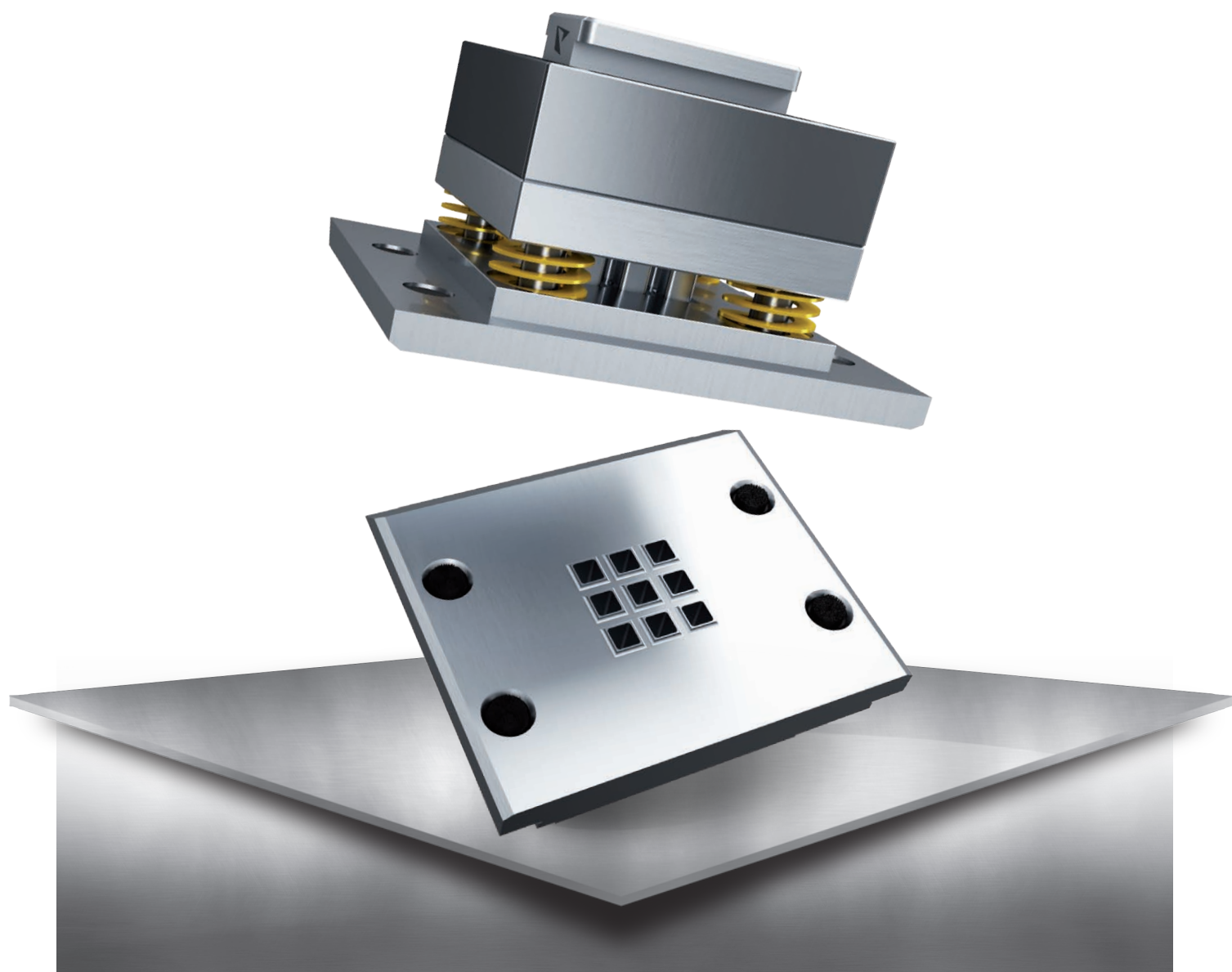


CATALOG 02/2015-WW-S.1

SALVAGNINI



## 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](http://www.pass-ag.com)

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# TOOLS FOR STATION P1 - P20

PASS TOOLS FOR YOUR SALVAGNINI SYSTEM

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# PASS STANDARD-SYSTEM (COMPACT VERSION)

TYPE: 33MM / 70 kN / P1 - P20

MAX. DIAMETER: 10 MM\*



	POS.-NO.	PART.-NO.	PRICE IN €
<b>PUNCH (H-PM®)</b>			
Round	1	201301	
Square	1	2013002	
Rectangle	1	2013003	
Oblong	1	2013004	
O.D. Ground Special Shape	1	21530G	
EDM Required Special Shape	1	21530E	
<b>STRIPPER</b>			
Round	2	210301	
Square	2	2103002	
Rectangle	2	2103003	
Oblong	2	2103004	
O.D. Ground Special Shape	2	21730G	
EDM Required Special Shape	2	21730E	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	3	206301	
Square	3	2063002	
Rectangle	3	2063003	
Oblong	3	2063004	
O.D. Ground Special Shape	3	21630G	
EDM Required Special Shape	3	21630E	

## SPARE PARTS

Shims for die t=0,3	203A33
Shims for die t=0,5	205A35

## ADDITIONAL COSTS FOR PUNCH

- \*TICN coating
- \*T-MAX coating
- \*A-MAX coating

## ADDITIONAL COSTS FOR STRIPPER

- Polypunch

## ADDITIONAL COSTS FOR DIE

- reinforced
- \*slug-snap

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

# PASS STANDARD-SYSTEM (COMPACT VERSION)

TYPE: 33MM / 70 kN / P1 - P20

MAX. DIAMETER: 33 MM\*

	POS.-NO.	PART-NO.	PRICE IN €
<b>PUNCH (H-PM®)</b>			
Round	1	201311	
Square	1	2013102	
Rectangle	1	2013103	
Oblong	1	2013104	
O.D. Ground Special Shape	1	21531G	
EDM Required Special Shape	1	21531E	
<b>STRIPPER</b>			
Round	2	210311	
Square	2	2103102	
Rectangle	2	2103103	
Oblong	2	2103104	
O.D. Ground Special Shape	2	21731G	
EDM Required Special Shape	2	21731E	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	3	206311	
Square	3	2063102	
Rectangle	3	2063103	
Oblong	3	2063104	
O.D. Ground Special Shape	3	21631G	
EDM Required Special Shape	3	21631E	



## ADDITIONAL COSTS FOR PUNCH

- \*TiCN coating
- \*T-MAX coating
- \*A-MAX coating

## SPARE PARTS

- Shims for die t=0,3 203A33
- Shims for die t=0,5 205A35

## ADDITIONAL COSTS FOR STRIPPER

- Polypunch

## ADDITIONAL COSTS FOR DIE

- reinforced
- \*slug-snap

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

# PASS P1-SYSTEM (NEEDLE INSERT)

TYPE: 33MM / 70 kN / P1 - P20

MAX. DIAMETER: 6 MM\*



	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	1-3	201401	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>PUNCH-CHUCK BODY</b>			
Round	1+2	219401	
<b>PUNCH INSERT (SHAFT Ø 6 MM) (H-PM®)</b>			
Round	3	207P1A1	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>STRIPPER</b>			
Round	4	210301	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	5	206301	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	

SPARE PARTS			ADDITIONAL COSTS FOR PUNCH	
Retaining screw	2	219403	*TICN coating	
Shims for die t=0,3		203A33	*T-MAX coating	
Shims for die t=0,5		205A35	*A-MAX coating	
			ADDITIONAL COSTS FOR STRIPPER	
			Polypunch	
			ADDITIONAL COSTS FOR DIE	
			reinforced	
			*slug-snap	

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

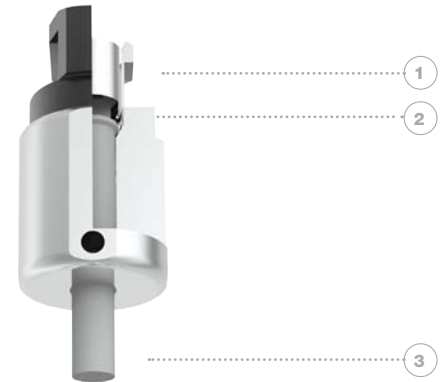


# PASS P1-SYSTEM (NEEDLE INSERT)

TYPE: 33MM / 70 kN / P1 - P20

MAX. DIAMETER: 10 MM\*

	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	1-3	201421	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>PUNCH-CHUCK BODY</b>			
Round	1+2	219421	
<b>PUNCH INSERT (SHAFT Ø 10,5 MM) (H-PM®)</b>			
Round	3	207P1B1	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>STRIPPER</b>			
Round	4	210301	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	5	206301	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	---



<b>ADDITIONAL COSTS FOR PUNCH</b>		<b>SPARE PARTS</b>	
*TICN coating		Retaining screw	2 219423
*T-MAX coating		Shims for die t=0,3	203A33
*A-MAX coating		Shims for die t=0,5	205A35
<b>ADDITIONAL COSTS FOR STRIPPER</b>			
Polypunch			
<b>ADDITIONAL COSTS FOR DIE</b>			
reinforced			
*slug-snap			

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

# PASS P2-SYSTEM

## (FOR 2 MM ADDITIONAL REGRIND LENGTH)

TYPE: 33MM / 70 kN / P1 - P20

MAX. DIAMETER: 10 MM\*



	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	1-4	201441	
Square	1-4	2014402	
Rectangle	1-4	2014403	
Oblong	1-4	2014404	
O.D. Ground Special Shape	1-4	21544G	
EDM Required Special Shape	1-4	21544E	
<b>PUNCH-CHUCK BODY</b>			
all shapes	1-3	219441	
<b>PUNCH INSERT (H-PM®)</b>			
Round	4	207P2A1	
Square	4	207P2A02	
Rectangle	4	207P2A03	
Oblong	4	207P2A04	
O.D. Ground Special Shape	4	207P2AG	
EDM Required Special Shape	4	207P2AE	
<b>STRIPPER</b>			
Round	5	210301	
Square	5	2103002	
Rectangle	5	2103003	
Oblong	5	2103004	
O.D. Ground Special Shape	5	21730G	
EDM Required Special Shape	5	21730E	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	6	206301	
Square	6	2063002	
Rectangle	6	2063003	
Oblong	6	2063004	
O.D. Ground Special Shape	6	21630G	
EDM Required Special Shape	6	21630E	

SPARE PARTS			ADDITIONAL COSTS FOR PUNCH	
Retaining screw	2	219444	*TICN coating	
Set shims for punch-chuck body (4x0,5mm)	3	219443	*T-MAX coating	
Shims for die t=0,3		203A33	*A-MAX coating	
Shims for die t=0,5		205A35		
			ADDITIONAL COSTS FOR STRIPPER	
			Polypunch	
			ADDITIONAL COSTS FOR DIE	
			reinforced	
			*slug-snap	

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

# PASS P2-SYSTEM

## (FOR 2 MM ADDITIONAL REGRIND LENGTH)

TYPE: 33MM / 70 kN / P1 - P20

MAX. DIAMETER: 16 MM\*

	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	1-4	201451	
Square	1-4	2014502	
Rectangle	1-4	2014503	
Oblong	1-4	2014504	
O.D. Ground Special Shape	1-4	21545G	
EDM Required Special Shape	1-4	21545E	
<b>PUNCH-CHUCK BODY</b>			
all shapes	1-3	219451	
<b>PUNCH INSERT (H-PM®)</b>			
Round	4	207P2B1	
Square	4	207P2B02	
Rectangle	4	207P2B03	
Oblong	4	207P2B04	
O.D. Ground Special Shape	4	207P2BG	
EDM Required Special Shape	4	207P2BE	
<b>STRIPPER</b>			
Round	5	210311	
Square	5	2103102	
Rectangle	5	2103103	
Oblong	5	2103104	
O.D. Ground Special Shape	5	21731G	
EDM Required Special Shape	5	21731E	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	6	206311	
Square	6	2063102	
Rectangle	6	2063103	
Oblong	6	2063104	
O.D. Ground Special Shape	6	21631G	
EDM Required Special Shape	6	21631E	



ADDITIONAL COSTS FOR PUNCH		SPARE PARTS	
*TICN coating		Retaining screw	2 219454
*T-MAX coating		Set shims for punch-chuck body (4x0,5mm)	3 219453
*A-MAX coating		Shims for die t=0,3	203A33
		Shims for die t=0,5	205A35
ADDITIONAL COSTS FOR STRIPPER			
Polypunch			
ADDITIONAL COSTS FOR DIE			
reinforced			
*slug-snap			

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

# PASS P4-SYSTEM

## (BLANKHOLDER SYSTEM AND NEEDLE INSERT)

TYPE: 33MM / 70 kN / P1 - P20

MAX. DIAMETER: 6 MM\*



	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	1-6	201521	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>PUNCH INSERT (SHAFT Ø 6 MM) (H-PM®)</b>			
Round	4	207P4A1	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>BLANKHOLDER/GUIDE</b>			
Round	6+3	219525	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM required Special Shape	---	---	
<b>STRIPPER</b>			
Round 35 mm	7	210335	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	8	206301	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	

SPARE PARTS			ADDITIONAL COSTS FOR PUNCH	
Punch head	1+2	219521	*TICN coating	
Retaining screw	2	219528	*T-MAX coating	
Retaining ring	3	219527	*A-MAX coating	
Spring	5	219526		
Shims for die t=0,3		203A33		
Shims for die t=0,5		205A35		
ADDITIONAL ACCESSORIES			ADDITIONAL COSTS FOR STRIPPER	
Assembly Adapter		299201599	Polypunch	
			ADDITIONAL COSTS FOR DIE	
			reinforced	
			*slug-snap	

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

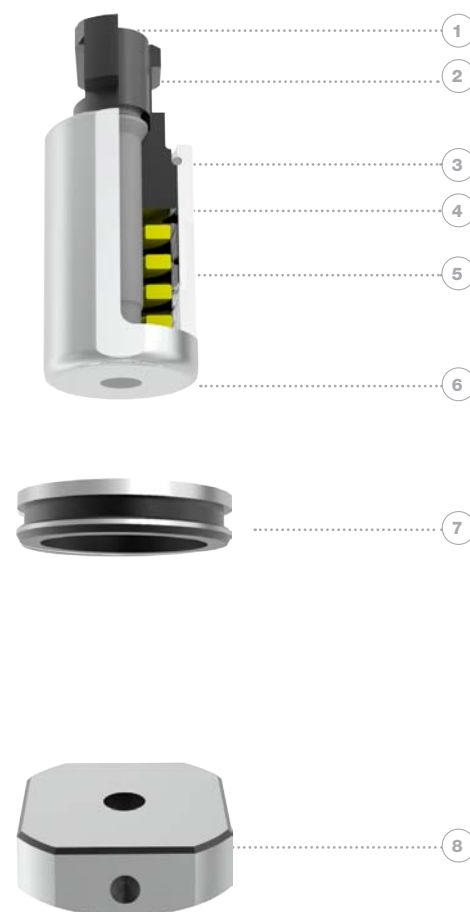
# PASS P4-SYSTEM

## (BLANKHOLDER SYSTEM AND NEEDLE INSERT)

TYPE: 33MM / 70 kN / P1 - P20

MAX. DIAMETER: 10 MM\*

	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	1-6	201561	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>PUNCH INSERT (SHAFT Ø 10,5 MM) (H-PM®)</b>			
Round	4	207P4B1	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>BLANKHOLDER/GUIDE</b>			
Round	6+3	219525	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>STRIPPER</b>			
Round 35 mm	7	210335	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	8	206301	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	



ADDITIONAL COSTS FOR PUNCH		SPARE PARTS	
*TICN coating		Punch head	1+2 219522
*T-MAX coating		Retaining screw	2 219528
*A-MAX coating		Retaining ring	3 219527
		Spring	5 219526
ADDITIONAL COSTS FOR STRIPPER		Shims for die t=0,3	203A33
Polypunch		Shims for die t=0,5	205A35
ADDITIONAL COSTS FOR DIE		ADDITIONAL ACCESSORIES	
reinforced		Assembly adapter	299201599
*slug-snap			

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

# PASS P5-SYSTEM

## (BLANKHOLDER SYSTEM AND PUNCH INSERT)

TYPE: 33MM / 70 kN / P1 - P20

MAX. DIAMETER: 10 MM\*(UP TO 12,5 MM IF REQUESTED)



	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	1-7	201531	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>PUNCH INSERT (H-PM®)</b>			
Round	5	207P5A1	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>BLANKHOLDER/GUIDE</b>			
Round	7+4	219534	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	
<b>STRIPPER</b>			
Round 35 mm	8	210335	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	9	206301	
Square	---	---	
Rectangle	---	---	
Oblong	---	---	
O.D. Ground Special Shape	---	---	
EDM Required Special Shape	---	---	

SPARE PARTS			ADDITIONAL COSTS FOR PUNCH	
Punch head	1-3	219532	*TICN coating	
Retaining screw	2	219537	*T-MAX coating	
Pin	3	219538	*A-MAX coating	
Retaining ring	4	219536		
Spring	6	219535		
Shims for die t=0,3		203A33		
Shims for die t=0,5		205A35		
ADDITIONAL ACCESSORIES:			ADDITIONAL COSTS FOR STRIPPER	
Assembly adapter		299201599	Polypunch	
			ADDITIONAL COSTS FOR DIE	
			reinforced	
			*slug-snap	

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

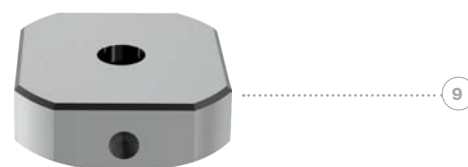
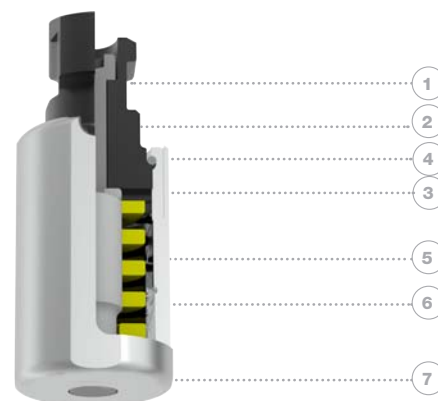
# PASS P6-SYSTEM

## (BLANKHOLDER SYSTEM AND PUNCH INSERT)

TYPE: 33 MM / 70 KN / P1 -P20

MAX. DIAMETER: 10 MM\* (UP TO 12,5 MM IF REQUESTED)

	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	---	---	
Square	1-7	2015102	
Rectangle	1-7	2015103	
Oblong	1-7	2015104	
O.D. Ground Special Shape	1-7	20151G	
EDM Required special Shape	1-7	20151E	
<b>PUNCH INSERT (H-PM®)</b>			
Round	---	---	
Square	5	207P6A02	
Rectangle	5	207P6A03	
Oblong	5	207P6A04	
O.D. Ground Special Shape	5	207P6AG	
EDM Required special Shape	5	207P6AE	
<b>BLANKHOLDER/GUIDE</b>			
Round	---	---	
Square	7+4	2195102	
Rectangle	7+4	2195103	
Oblong	7+4	2195104	
O.D. Ground Special Shape	7+4	21951G	
EDM Required special Shape	7+4	21951E	
<b>STRIPPER</b>			
Round 35mm	8	210335	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	---	---	
Square	9	2063002	
Rectangle	9	2063003	
Oblong	9	2063004	
O.D. Ground Special Shape	9	21630G	
EDM Required special Shape	9	21630E	



ADDITIONAL COSTS FOR PUNCH		SPARE PARTS	
*TICN coating		Punch head	1-3 219511
*T-MAX coating		Retaining screw	2 219512
*A-MAX coating		Pin	3 219513
		Retaining ring	4 219514
		Spring	6 219516
		Shims for die t=0,3	203A33
		Shims for die t=0,5	205A35
ADDITIONAL COSTS FOR STRIPPER		ADDITIONAL ACCESSORIES	
Polypunch		Assembly adapter	299201599
ADDITIONAL COSTS FOR DIE			
reinforced			
*slug-snap			

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

# PASS P7-SYSTEM

## (BLANKHOLDER SYSTEM AND PUNCH INSERT)

TYPE: 33MM / 70KN / P1 - P20

DIAMETER: 10,01 - 26 MM



	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	1-8	201551	
Square	1-8	2015502	
Rectangle	1-8	2015503	
Oblong	1-8	2015504	
O.D. Ground Special Shape	1-8	20155G	
EDM Required Special Shape	1-8	20155E	
<b>PUNCH INSERT (H-PM®)</b>			
Round	3	207P7B1	
Square	3	207P7B02	
Rectangle	3	207P7B03	
Oblong	3	207P7B04	
O.D. Ground Special Shape	3	207P7BG	
EDM Required Special Shape	3	207P7BE	
<b>BLANKHOLDER/GUIDE</b>			
Round	8+7	219552	
Square	8+7	2195502	
Rectangle	8+7	2195503	
Oblong	8+7	2195504	
O.D. Ground Special Shape	8+7	21955G	
EDM Required Special Shape	8+7	21955E	
<b>STRIPPER</b>			
Round 35 mm	9	210335	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	10	206311	
Square	10	2063102	
Rectangle	10	2063103	
Oblong	10	2063104	
O.D. Ground Special Shape	10	21631G	
EDM Required Special Shape	10	21631E	

SPARE PARTS			ADDITIONAL COSTS FOR PUNCH	
Punch head	1+2+4	219551	*TICN coating	
Retaining screw	2	219553	*T-MAX coating	
Pin	4	219556	*A-MAX coating	
Spring	5	219557		
Spacer	6	219558		
Retaining ring	7	219559		
Shims for die t=0,3		203A33		
Shims for die t=0,5		205A35		
ADDITIONAL ACCESSORIES			ADDITIONAL COSTS FOR STRIPPER	
Assembling circlip pliers		220300	Poly punch	
Assembling pin		220994		
			ADDITIONAL COSTS FOR DIE	
			reinforced	
			*slug-snap	

\* SEE TECHNICAL INFORMATION PAGE 51 - 57



# PASS P8-SYSTEM (PUNCH INSERT)

TYPE: 33 MM / 70 KN / P1 - P20

DIAMETER: 10,01 - 33 MM\*

	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	1-3	201651	
Square	1-3	2016502	
Rectangle	1-3	2016503	
Oblong	1-3	2016504	
O.D. Ground Special Shape	1-3	21565G	
EDM Required Special Shape	1-3	21565E	
<b>PUNCH BODY</b>			
all shapes	1+2	219651	
<b>PUNCH INSERT (H-PM®)</b>			
Round	3	207P8B1	
Square	3	207P8B02	
Rectangle	3	207P8B03	
Oblong	3	207P8B04	
O.D. Ground Special Shape	3	207P8BG	
EDM Required Special Shape	3	207P8BE	
<b>STRIPPER</b>			
Round	4	210311	
Square	4	2103102	
Rectangle	4	2103103	
Oblong	4	2103104	
O.D. Ground Special Shape	4	21731G	
EDM Required Special Shape	4	21731E	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	5	206311	
Square	5	2063102	
Rectangle	5	2063103	
Oblong	5	2063104	
O.D. Ground Special Shape	5	21631G	
EDM Required Special Shape	5	21631E	



## ADDITIONAL COSTS FOR PUNCH

\*TICN coating  
\*T-MAX coating  
\*A-MAX coating

## SPARE PARTS

Retaining screw 2 219654  
Shims for die t=0,3 203A33  
Shims for die t=0,5 205A35

## ADDITIONAL COSTS FOR STRIPPER

Polypunch

## ADDITIONAL COSTS FOR DIE

reinforced  
\*slug-snap

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

CONTACT: +49 92 70 / 9 85 - 0

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# PASS P9-SYSTEM

## (BLANKHOLDER SYSTEM AND PUNCH INSERT)

TYPE: 33 MM / 70 KN / P1 -P20

DIAMETER: 10,01 - 26,5 MM\*



	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	1-8	201571	
Square	1-8	2015702	
Rectangle	1-8	2015703	
Oblong	1-8	2015704	
O.D. Ground Special Shape	1-8	20157G	
EDM Required Special Shape	1-8	20157E	
<b>PUNCH INSERT (H-PM®)</b>			
Round	6	207P9B1	
Square	6	207P9B02	
Rectangle	6	207P9B03	
Oblong	6	207P9B04	
O.D. Ground Special Shape	6	207P9BG	
EDM Required Special Shape	6	207P9BE	
<b>BLANKHOLDER/GUIDE</b>			
Round	8+3	219571	
Square	8+3	2195702	
Rectangle	8+3	2195703	
Oblong	8+3	2195704	
O.D. Ground Special Shape	8+3	21957G	
EDM Required Special Shape	8+3	21957E	
<b>STRIPPER</b>			
Round 35 mm	9	210335	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	10	206311	
Square	10	2063102	
Rectangle	10	2063103	
Oblong	10	2063104	
O.D. Ground Special Shape	10	21631G	
EDM Required Special Shape	10	21631E	

SPARE PARTS			ADDITIONAL COSTS FOR PUNCH	
Punch head	1+2+4	219572	*TICN coating	
Retaining screw	2	219573	*T-MAX coating	
Pin	4	219576	*A-MAX coating	
Spring	5	219577		
Spacer	7	219578		
Retaining ring	3	219579		
Shims for die t=0,3		203A33		
Shims for die t=0,5		205A35		
ADDITIONAL ACCESSORIES			ADDITIONAL COSTS FOR STRIPPER	
Assembly adapter		299201599	Poly punch	
			ADDITIONAL COSTS FOR DIE	
			reinforced	
			*slug-snap	

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

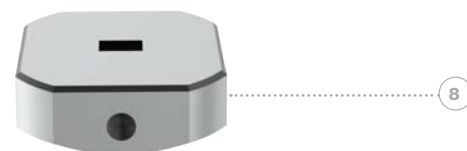
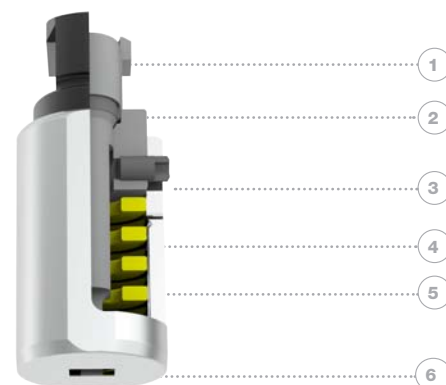
# PASS P10-SYSTEM

## (BLANKHOLDER SYSTEM AND NEEDLE INSERT)

TYPE: 33 MM / 70 KN / P1 -P20

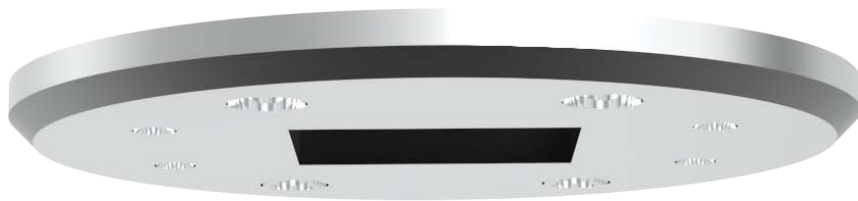
MAX. DIAMETER: 10 MM\*

	POS.-NO.	PART-NO.	PRICE IN €
<b>UPPER PART</b>			
Round	1-6	201661	
Square	1-6	2016602	
Rectangle	1-6	2016603	
Oblong	1-6	2016604	
O.D. Ground Special Shape	1-6	21566G	
EDM Required Special Shape	1-6	21566E	
<b>PUNCH INSERT (SHAFT Ø10,5 MM) (H-PM®)</b>			
Round	4	207P10A1	
Square	4	207P10A02	
Rectangle	4	207P10A03	
Oblong	4	207P10A04	
O.D. Ground Special Shape	4	207P10AG	
EDM Required Special Shape	4	207P10AE	
<b>BLANKHOLDER/GUIDE</b>			
Round	6+3	219661	
Square	6+3	2196602	
Rectangle	6+3	2196603	
Oblong	6+3	2196604	
O.D. Ground Special Shape	6+3	21966G	
EDM Required Special Shape	6+3	21966E	
<b>STRIPPER</b>			
Round 35 mm	7	210335	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	8	206301	
Square	8	2063002	
Rectangle	8	2063003	
Oblong	8	2063004	
O.D. Ground Special Shape	8	21630G	
EDM Required Special Shape	8	21630E	



ADDITIONAL COSTS FOR PUNCH		SPARE PARTS	
*TICN coating		Punch head	1+2 219671
*T-MAX coating		Retaining screw	2 219666
*A-MAX coating		Spring	5 219663
		Special-threadscrew	3 219665
		Shims for die t=0,3	203A33
		Shims for die t=0,5	205A35
ADDITIONAL COSTS FOR STRIPPER			
Polypunch			
ADDITIONAL COSTS FOR DIE		ADDITIONAL ACCESSORIES	
reinforced		Assembly adapter	299201599
*slug-snap			

\* SEE TECHNICAL INFORMATION PAGE 51 - 57



# PASS STANDARD SYSTEM FOR P2R

PASS TOOLS FOR YOUR  
SALVAGNINI SYSTEM

## INDEX

blank-holder style	- 42 mm	page 22
blank-holder style	- 50,8 mm	page 23
compact version	- 60 mm	page 24

# PASS STANDARD-SYSTEM (BLANK-HOLDER STYLE)

TYPE: 42 MM / 120 kN / P2R

MAX. DIAMETER: 42 MM\*



	POS.-NO.	PART-NO.	PRICE IN €
<b>PUNCH (H-PM®)</b>			
Round	1	201L01	
Square	1	201L002	
Rectangle	1	201L003	
Oblong	1	201L004	
O.D. Ground Special Shape	1	215LOG	
EDM Required Special Shape	1	215LOE	
<b>STRIPPER</b>			
Round	2	210L01	
Square	2	210L002	
Rectangle	2	210L003	
Oblong	2	210L004	
O.D. Ground Special Shape	2	217LOG	
EDM Required Special Shape	2	217LOE	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	3	206L01	
Square	3	206L002	
Rectangle	3	206L003	
Oblong	3	206L004	
O.D. Ground Special Shape	3	216LOG	
EDM Required Special Shape	3	216LOE	

## SPARE PARTS

Shims for die t=0,3		203A01
Shims for die t=0,5		205A01
Brush inserts Ø 13 mm (piece)	4	200B00
Brush inserts Ø 8 mm (piece)	4	200B01

## ADDITIONAL COSTS FOR PUNCH

*TICN coating
*T-MAX coating
*A-MAX coating

## ADDITIONAL COSTS FOR DIE

reinforced
*slug-snap

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

# PASS STANDARD-SYSTEM (BLANK-HOLDER STYLE)

TYPE: 50,8 MM / 120 kN / P2R

MAX. DIAMETER: 50,8 MM\*

	POS.-NO.	PART-NO.	PRICE IN €
<b>PUNCH (H-PM®)</b>			
Round	1	20115001	
Square	1	20115002	
Rectangle	1	20115003	
Oblong	1	20115004	
O.D. Ground Special Shape	1	215150G	
EDM Required Special Shape	1	215150E	
<b>STRIPPER</b>			
Round	2	21015001	
Square	2	21015002	
Rectangle	2	21015003	
Oblong	2	21015004	
O.D. Ground Special Shape	2	217150G	
EDM Required Special Shape	2	217150E	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	3+4	20615001	
Square	3+4	20615002	
Rectangle	3+4	20615003	
Oblong	3+4	20615004	
O.D. Ground Special Shape	3+4	216150G	
EDM Required Special Shape	3+4	216150E	



ADDITIONAL COSTS FOR PUNCH		SPARE PARTS	
*TICN coating		Shims for die t=0,3	203A01
*T-MAX coating		Shims for die t=0,5	205A01
*A-MAX coating		Brush inserts Ø 13 mm (piece)	4 200B00
		Brush inserts Ø 8 mm (piece)	4 200B01
ADDITIONAL COSTS FOR DIE			
reinforced			
*slug-snap			

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

# PASS STANDARD-SYSTEM (COMPACT VERSION)

TYPE: 60 MM / 120 kN / P2R

MAX. DIAMETER: 60 MM\*



	POS.-NO.	PART-NO.	PRICE IN €
<b>PUNCH (H-PM®)</b>			
Round	1	201L11	
Square	1	201L102	
Rectangle	1	201L103	
Oblong	1	201L104	
O.D. Ground Special Shape	1	215L1G	
EDM Required Special Shape	1	215L1E	
<b>STRIPPER</b>			
Round	2	210L11	
Square	2	210L102	
Rectangle	2	210L103	
Oblong	2	210L104	
O.D. Ground Special Shape	2	217L1G	
EDM Required Special Shape	2	217L1E	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	3+4	206L11	
Square	3+4	206L102	
Rectangle	3+4	206L103	
Oblong	3+4	206L104	
O.D. Ground Special Shape	3+4	216L1G	
EDM Required Special Shape	3+4	216L1E	

## SPARE PARTS

Shims for die t=0,3		203A11
Shims for die t=0,5		205A11
Brush inserts Ø 13 mm (piece)	4	200B00
Brush inserts Ø 8 mm (piece)	4	200B01

## ADDITIONAL COSTS FOR PUNCH

- \*TiCN coating
- \*T-MAX coating
- \*A-MAX coating

## ADDITIONAL COSTS FOR DIE

- reinforced
- \*slug-snap

\* SEE TECHNICAL INFORMATION PAGE 51 - 57







# TOOLS FOR P21 - P24

PASS TOOLS FOR YOUR  
SALVAGNINI SYSTEM

## INDEX

Punch position P22 and P23	70 x 90 mm	page 28
Punch position P21 and P24	90 x 90 mm	page 29
Punch position P21 to P24	70 x 90 mm	page 30

# PASS STANDARD-SYSTEM (COMPACT VERSION)

TYPE: 90MM / 260 kN / P22 AND P23

MAX. DIAMETER: 70X90 MM\*



	POS.-NO.	PART-NO.	PRICE IN €
<b>PUNCH BODY</b>			
all shapes	1	200L61	
<b>PUNCH (H-PM®)</b>			
Round	2	201L61	
Square	2	201L602	
Rectangle	2	201L603	
Oblong	2	201L604	
O.D. Ground Special Shape	2	215L6G	
EDM Required Special Shape	2	215L6E	
<b>STRIPPER</b>			
Round	3+5	210L61	
Square	3+5	210L602	
Rectangle	3+5	210L603	
Oblong	3+5	210L604	
O.D. Ground Special Shape	3+5	217L6G	
EDM Required Special Shape	3+5	217L6E	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	4+5	206L61	
Square	4+5	206L602	
Rectangle	4+5	206L603	
Oblong	4+5	206L604	
O.D. Ground Special Shape	4+5	216L6G	
EDM Required Special Shape	4+5	216L6E	

## SPARE PARTS

Shims for die t=0,3		203A06
Shims for die t=0,5		205A06
Brush inserts Ø 13 mm (piece)	5	200B00
Brush inserts Ø 8 mm (piece)	5	200B01

## ADDITIONAL COSTS FOR PUNCH

- \*TICN coating
- \*T-MAX coating
- \*A-MAX coating

## ADDITIONAL COSTS FOR DIE

- reinforced
- \*slug-snap

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

# PASS STANDARD-SYSTEM (COMPACT VERSION)

TYPE: 90MM / 260 kN / P21 AND P24

MAX. DIAMETER: 90X90 MM\*

	POS.-NO.	PART-NO.	PRICE IN €
<b>PUNCH BODY</b>			
all shapes	1	200L71	
<b>PUNCH (H-PM®)</b>			
Round	2	201L71	
Square	2	201L702	
Rectangle	2	201L703	
Oblong	2	201L704	
O.D Ground Special Shape	2	215L7G	
EDM Required Special Shape	2	215L7E	
<b>STRIPPER</b>			
Round	3+5	210L71	
Square	3+5	210L702	
Rectangle	3+5	210L703	
Oblong	3+5	210L704	
O.D Ground Special Shape	3+5	217L7G	
EDM Required Special Shape	3+5	217L7E	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	4+5	206L71	
Square	4+5	206L702	
Rectangle	4+5	206L703	
Oblong	4+5	206L704	
O.D Ground Special Shape	4+5	216L7G	
EDM Required Special Shape	4+5	216L7E	



ADDITIONAL COSTS FOR PUNCH		SPARE PARTS	
*TICN coating		Shims for die t=0,3	203A07
*T-MAX coating		Shims for die t=0,5	205A07
*A-MAX coating		Brush inserts Ø 13 mm (piece)	5 200B00
		Brush inserts Ø 8 mm (piece)	5 200B01
ADDITIONAL COSTS FOR PUNCH			
reinforced			
*slug-snap			

\* SEE TECHNICAL INFORMATION PAGE 51 - 57

# PASS STANDARD-SYSTEM (COMPACT VERSION)

TYPE: 70MM / 260 kN / P21 TO P24

MAX. DIAMETER: 70X90 MM\*



	POS.-NO.	PART-NO.	PRICE IN €
<b>PUNCH BODY</b>			
alle shapes	1	200L81	
<b>PUNCH (H-PM®)</b>			
Round	2	201L81	
Square	2	201L802	
Rectangle	2	201L803	
Oblong	2	201L804	
O.D. Ground Special Shape	2	215L8G	
EDM Required Special Shape	2	215L8E	
<b>STRIPPER</b>			
Round	3+5	210L81	
Square	3+5	210L802	
Rectangle	3+5	210L803	
Oblong	3+5	210L804	
O.D. Ground Special Shape	3+5	217L8G	
EDM Required Special Shape	3+5	217L8E	
<b>DIE (slug-stop*) (H-PM®)</b>			
Round	4+5	206L81	
Square	4+5	206L802	
Rectangle	4+5	206L803	
Oblong	4+5	206L804	
O.D. Ground Special Shape	4+5	216L8G	
EDM Required Special Shape	4+5	216L8E	

## SPARE PARTS

Shims for die t=0,3		203A08
Shims for die t=0,5		205A08
Brush inserts Ø 13 mm (piece)	5	200B00
Brush inserts Ø 8 mm (piece)	5	200B01

## ADDITIONAL COSTS FOR PUNCH

- \*TiCN coating
- \*T-MAX coating
- \*A-MAX coating

## ADDITIONAL COSTS FOR DIE

- reinforced
- \*slug-snap

\* SEE TECHNICAL INFORMATION PAGE 51 - 57







# TOOLING CASSETTES

## PASS TOOLS FOR YOUR SALVAGNINI SYSTEM

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P2R cassette - blank-holder style to S4	- 42 mm	page 35
P2R cassette - blank-holder style to S4	- 50,8 mm	page 36
P2R cassette - solid to S4	- 60 mm	page 37
P1 to P20 cassette to S4	- 33 mm	page 38
P21 to P24 / Front & Rear cassette solid to S4	70 x 90 mm	page 39
P21 and P22 / Rear cassette solid to S4	70 x 90 / 90 x 90 mm	page 40
P23 and P24 / Front cassette solid to S4	70 x 90 / 90 x 90 mm	page 41
P21 to P24 cassette solid to S2	90 x 90 / 90 x 90 mm	page 42
P1 - P20 cassette solid to S2	- 33 mm	page 43
P31 to P35 / Polypunch cassette to S4	- 33 mm	page 44

# PASS TOOLING CASSETTE TO TYPE „SALVAGNINI S4“

TYPE: 33 MM / 120 kN / P2R (SOLID)

MAX. DIAMETER: 33 MM

PART-NO.

PRICE IN €

CASSETTE FOR PUNCH

299X33000

CASSETTE FOR DIE

299X33080



# PASS TOOLING CASSETTE TO TYPE „SALVAGNINI S4“

TYPE: 42 MM / 120 kN / P2R (BLANK-HOLDER STYLE)

MAX. DIAMETER: 42 MM

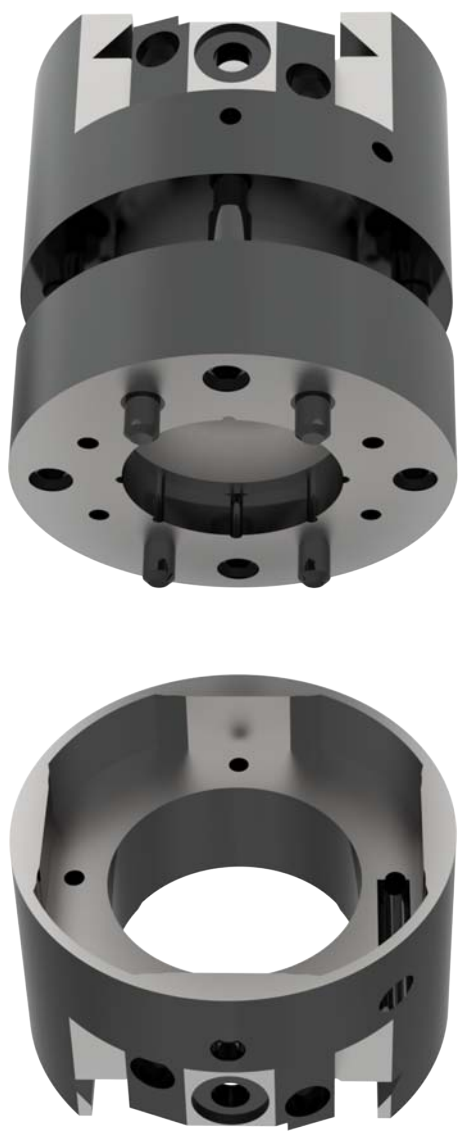
	PART-NO.	PRICE IN €
CASSETTE FOR PUNCH	299X42000	
CASSETTE FOR DIE	299X60080	



# PASS TOOLING CASSETTE TO TYPE „SALVAGNINI S4“

TYPE: 50,8 MM / 120 kN / P2R (BLANK-HOLDER STYLE)  
MAX. DIAMETER: 50,8 MM

	PART-NO.	PRICE IN €
CASSETTE FOR PUNCH	299X50800	
CASSETTE FOR DIE	299X60080	



# PASS TOOLING CASSETTE TO TYPE „SALVAGNINI S4“

TYPE: 60 MM / 120 kN / P2R (SOLID)

MAX. DIAMETER: 60 MM

	PART-NO.	PRICE IN €
CASSETTE FOR PUNCH	299X60000	
CASSETTE FOR DIE	299X60080	



# PASS TOOLING CASSETTE TO TYPE „SALVAGNINI S4“

TYPE: 33 MM / 70 kN / P1 TO P20 (SOLID)

MAX. DIAMETER: 33 MM

PART-NO.

PRICE IN €

CASSETTE FOR PUNCH

299X33020

CASSETTE FOR DIE

299X33090



# PASS TOOLING CASSETTE TO TYPE „SALVAGNINI S4“

TYPE: 70 MM / 260 kN / P21 TO P24 / FRONT & REAR (SOLID)

MAX. DIAMETER: 70X90 MM

	PART-NO.	PRICE IN €
CASSETTE FOR PUNCH	299X77010	
CASSETTE FOR DIE	299X77080	



# PASS TOOLING CASSETTE TO TYPE „SALVAGNINI S4“

TYPE: 90 MM / 260 kN / P21 AND P22 / REAR (SOLID)

MAX. DIAMETER: 70X90 MM / 90X90 MM

PART-NO.

PRICE IN €

CASSETTE FOR PUNCH (REAR)

299X79010

CASSETTE FOR DIE (REAR)

299X79080





# PASS TOOLING CASSETTE TO TYPE „SALVAGNINI S4“

TYPE: 90 MM / 260 kN / P23 AND P24 / FRONT (SOLID)

MAX. DIAMETER: 70X90 MM / 90X90 MM

	PART-NO.	PRICE IN €
CASSETTE FOR PUNCH (FRONT)	299X79020	
CASSETTE FOR DIE (FRONT)	299X79090	



# PASS TOOLING CASSETTE TO TYPE „SALVAGNINI S2“

TYPE: 90 MM / 260 kN / P21 TO P24 (SOLID)

MAX. DIAMETER: 90X90 MM / 90X90 MM

PART-NO.

PRICE IN €

CASSETTE FOR PUNCH

299X99510

CASSETTE FOR DIE

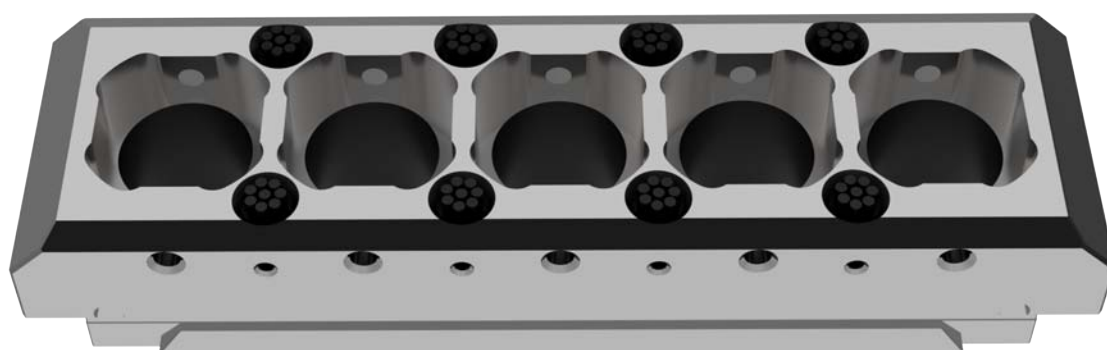
299X99520



# PASS TOOLING CASSETTE TO TYPE „SALVAGNINI S2“

TYPE: 33 MM / 70 kN / P1 TO P20 (SOLID)  
MAX. DIAMETER: 33 MM

	PART-NO.	PRICE IN €
CASSETTE FOR PUNCH	299X33520	
CASSETTE FOR DIE	299X33590	



# PASS TOOLING CASSETTE

## POLYPUNCH TO TYPE „SALVAGNINI S4“

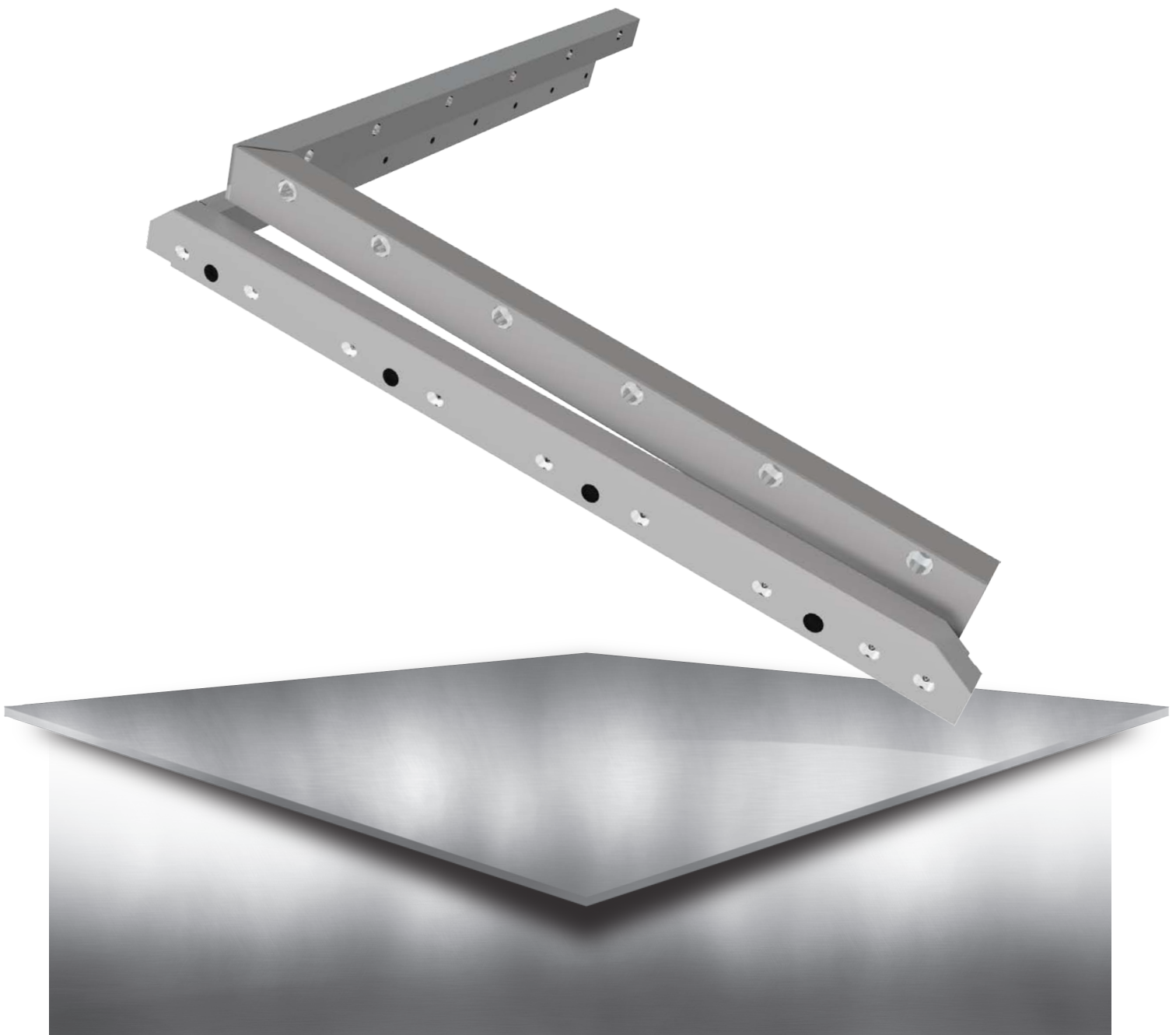
TYPE: 33 MM / 40 kN / P31 TO P35 (SOLID)

MAX. DIAMETER: 33 MM

PART-NO.	PRICE IN €
CASSETTE FOR PUNCH	
299XP0010	
CASSETTE FOR DIE	
299XP0080	







# ACCESSORIES

## PASS ACCESSORIES FOR SALVAGNINI SYSTEM

### INDEX

PASS Shear blades	400 mm	page 48
PASS Shear blades	500 mm	page 49

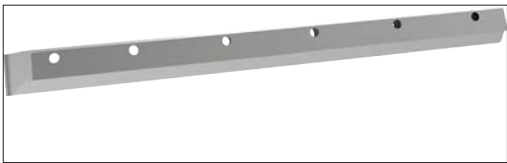
# PASS SHEAR BLADES

TYPE: 400 MM

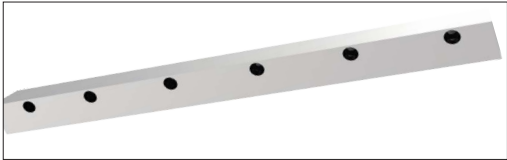
MADE OF X3-PM STEEL FOR LONG-LASTING LIFETIME



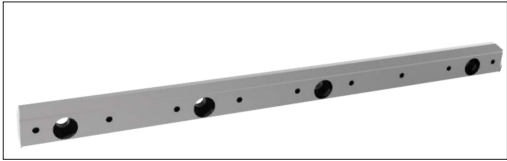
SHEAR BLADES - 400 MM		PART-NO.	PRICE IN €
Set	SCHER- MESSER400		



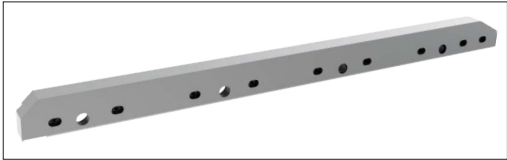
top X



top Y



bottom X



bottom Y

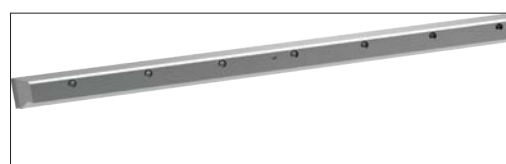


# PASS SHEAR BLADES

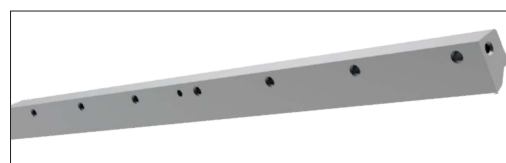
TYPE: 500 MM

MADE OF X3-PM STEEL FOR LONG-LASTING LIFETIME

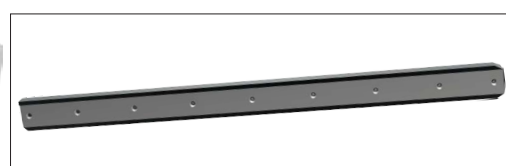
	PART-NO.	PRICE IN €
SHEAR BLADES - 500 MM		
Set	SCHER- MESSER500	



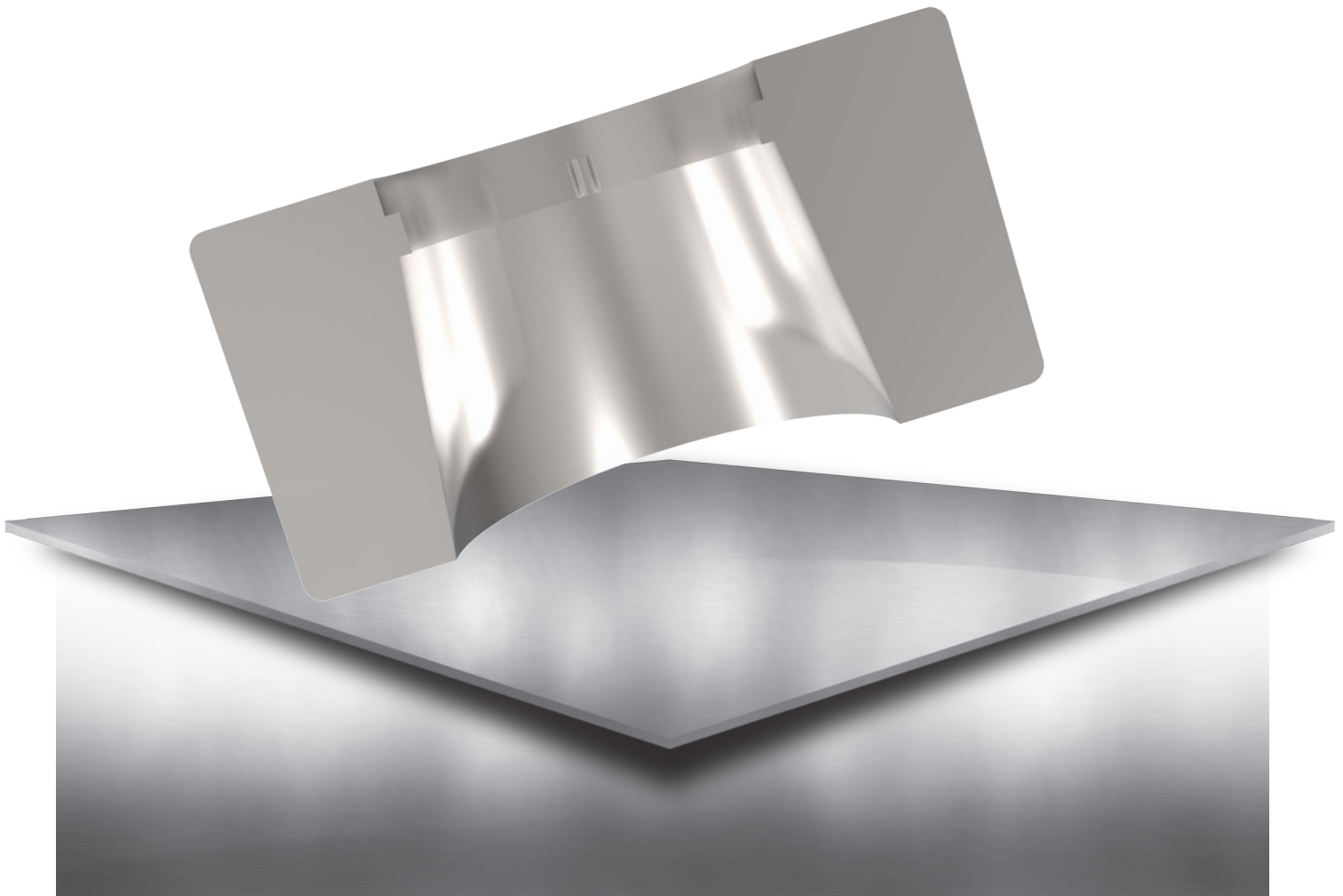
top X



top Y



bottom  
X and Y

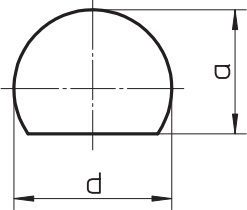
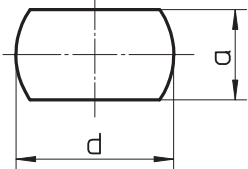
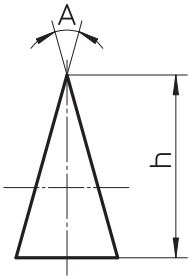
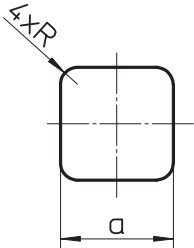
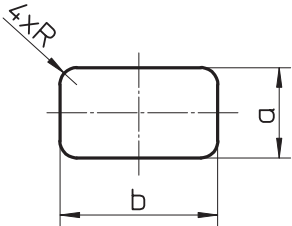
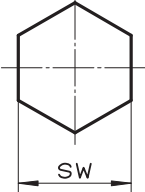
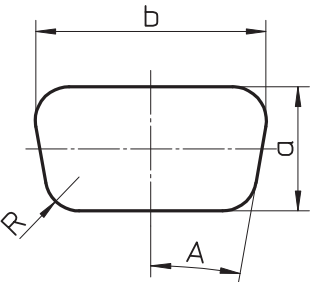
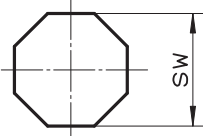
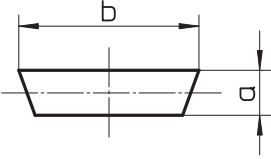
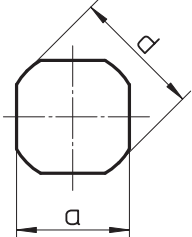
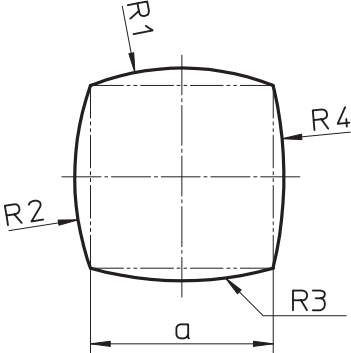


# TECHNICAL INFORMATION

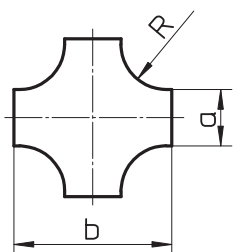
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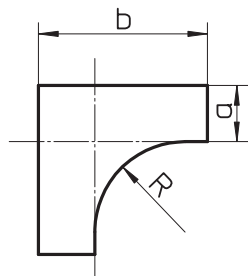
# O.D. GROUND SPECIAL SHAPE

 <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>	

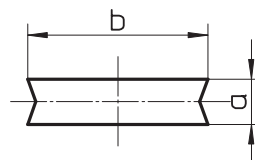
# EDM REQUIRED SPECIAL SHAPE



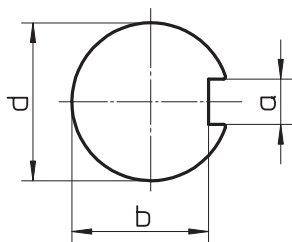
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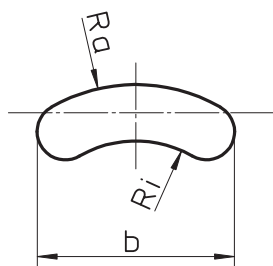
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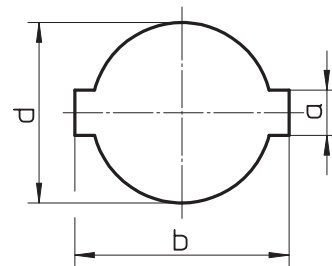
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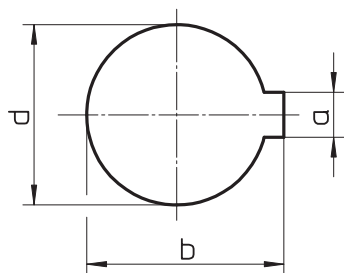
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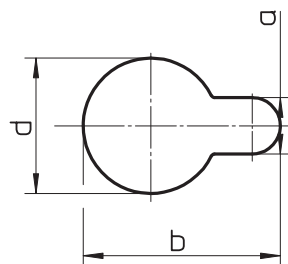
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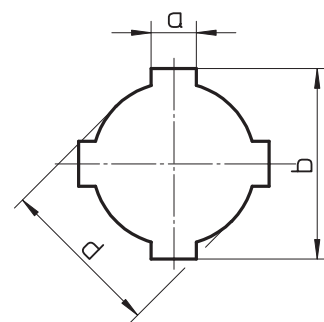
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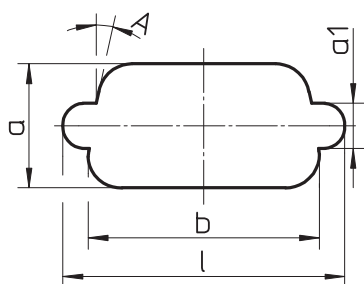
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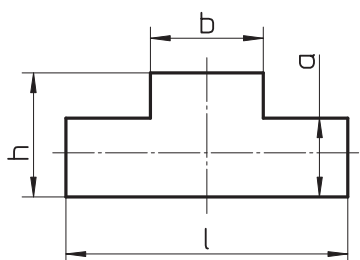
E08



E09



E10



E11

# 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

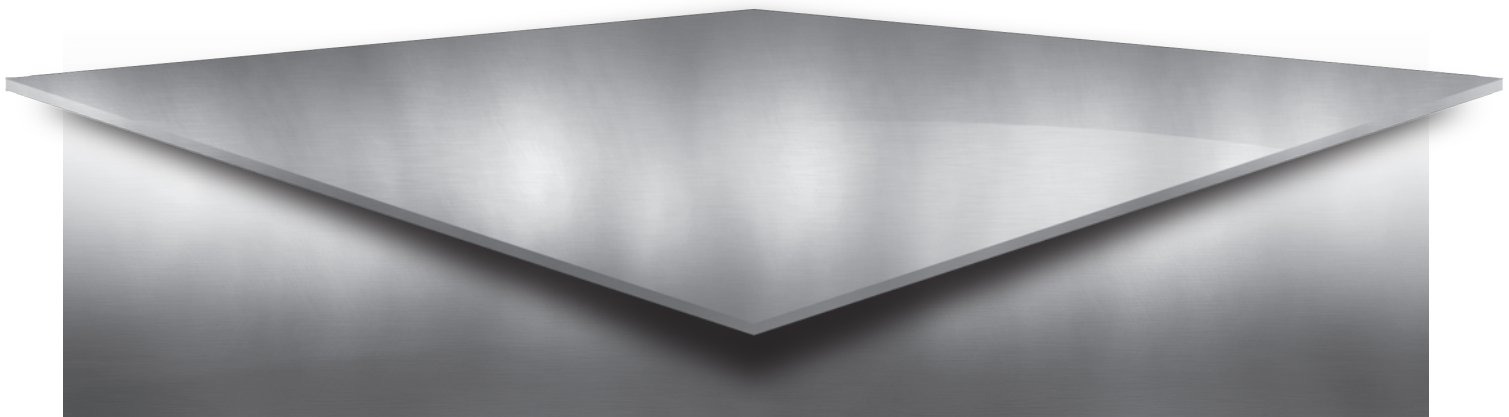
## X8-PM

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.

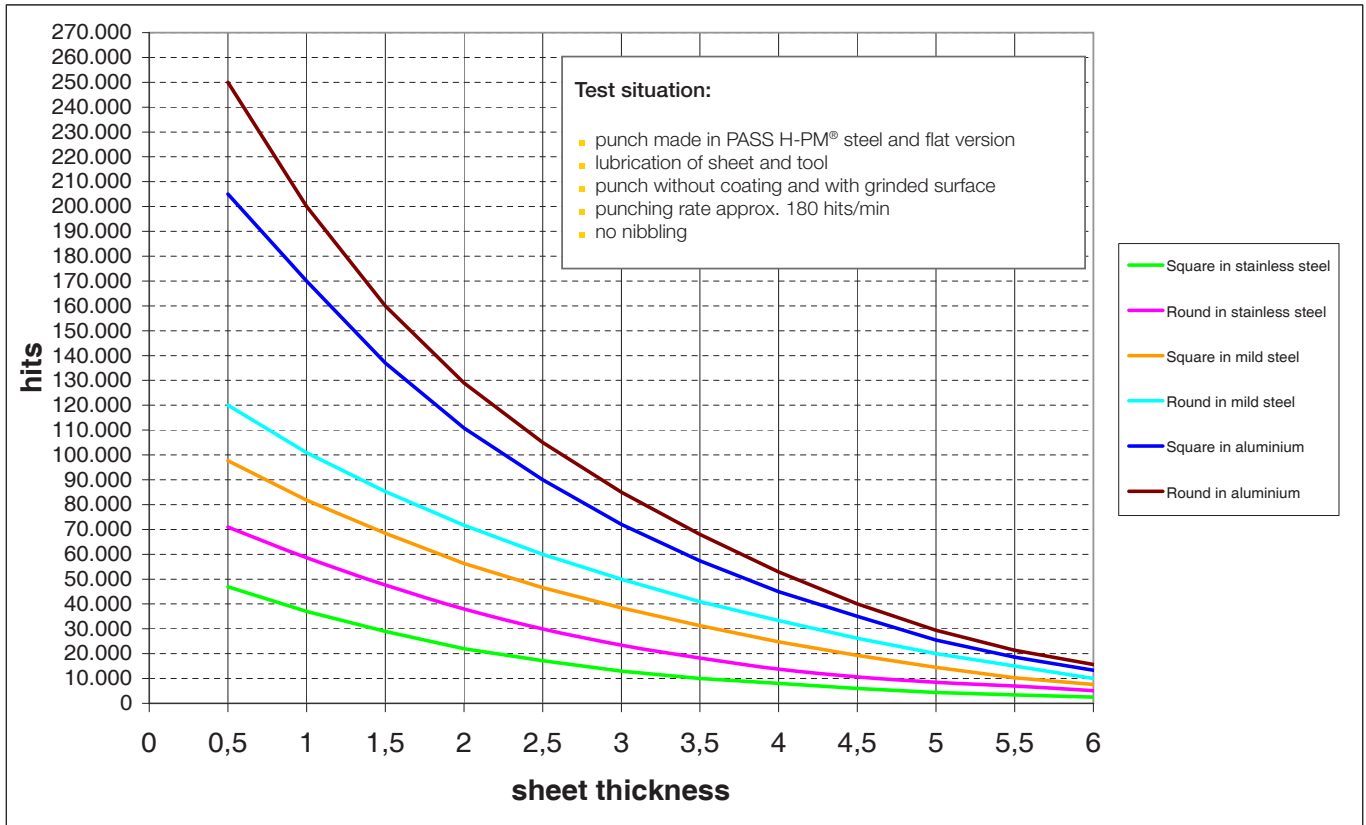
Advantage for customer:

- 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.

# PASS - COATING VERSIONS TO REDUCE MATERIAL BUILD-UP

Generally PASS punching tools are made of H-PM® to fulfil the highest punching demands.

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

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

Associated with modern production methods (grinding of the cutting edges with special grinding wheels) we can ensure that the wide range of different sheet qualities can be punched up to 1.600 N/mm<sup>2</sup> - no matter if it concerns mild alloyed aluminium, mild steel, stainless steel or spring band steel.

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

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

Built-up edges are known especially when working with

- zinc steel
- aluminium sheets
- copper sheets

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



**C-MAX**

for working with copper



**T-MAX**

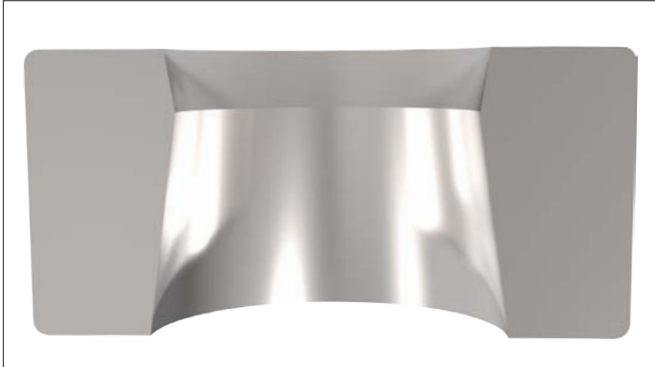
for working with  
galvanized sheet



# DIE VERSIONS

slug-stop and slug-snap (avoid the build-up of the pulling slugs)

slug-stop (Standard)



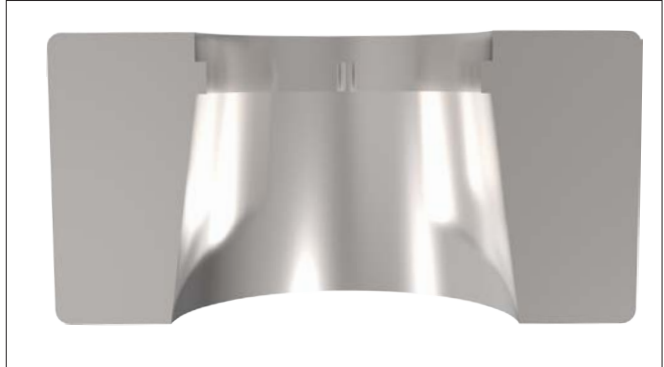
PASS dies for tooling system Salvagnini are produced in standard version with a slug-stop version (without additional costs).

This means that the upper part of the cutting part is produced with a negative angle. The pulling slug will be held with the complete circumference in the die.

This is not recommended for:

- shapes smaller 4 mm
- Clearance smaller/ equal 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 pulling slug positively (better than the slug-stop version).

The slug-snap version is also more convenient for:

- shapes smaller than 4 mm
- Clearance smaller/equal 0,1mm.

## General Notice Shear

A shear will be made in all punches with a diameter from 11 mm on in order to reduce the punch force.



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

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



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