

PASS STANZTECHNIK AG
Precision in Perfection



System 3

CATALOG
for SALVAGNINI Tool Systems



System

Salvagnini

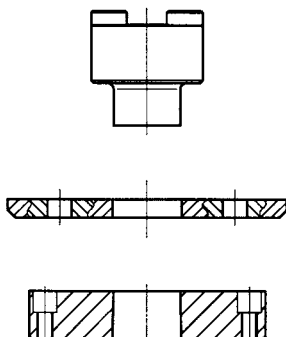
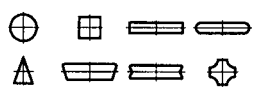
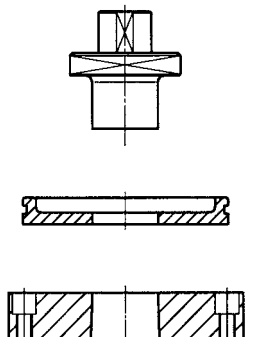
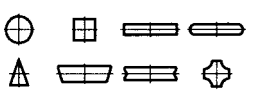
Catalog 9/2009-S supercedes Catalog 5/2001-S

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PASS reserves the right to make changes at any time without notice.

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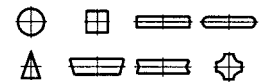
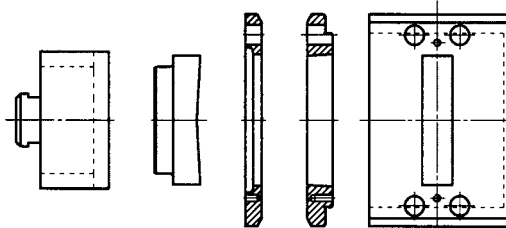
Overview

42 mm / 60 mm Punch Station		
<p>to 42 mm (1.653")</p>   <p>pages 38 - 39</p>	<p>to 60 mm (2.362")</p>   <p>pages 40 - 41</p>	

Overview

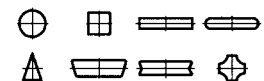
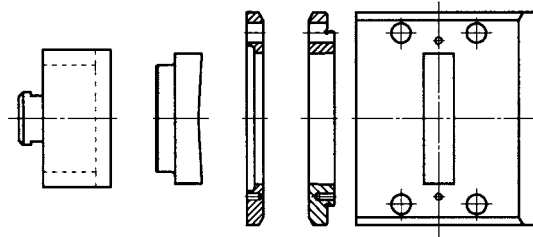
Large Station tools for P21 - P24 (70 x 90 / 90 x 90 / 101 x 101)

System 3
 70 x 90 Tools
 Position P22 / P23
 (machines with 90 x 90)



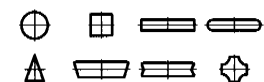
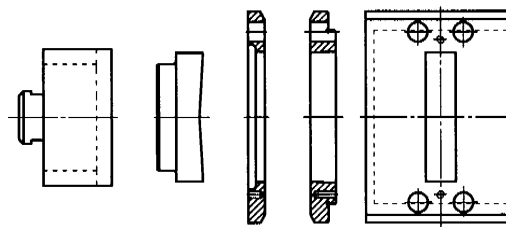
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System 3
 90 x 90 Tools
 Position P21 / P24



pages 44 - 45

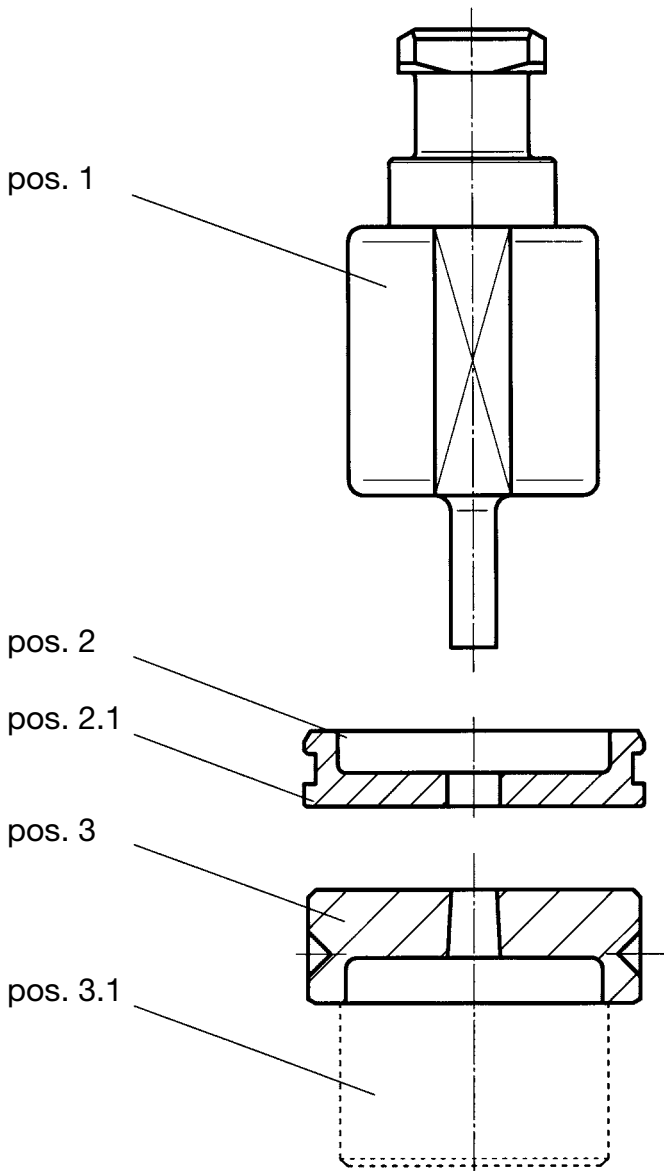
System 3
 70 x 90 Tools
 Position P21 - P24
 (machines without 90 x 90)



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TOOL - SYSTEM 3

PASS - Standard Tools
 from 0,8 mm (.032") to 10 mm (.394")




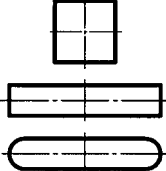
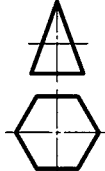
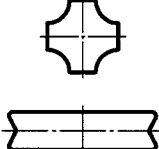
For machines with
 brush-table system

For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1



**Standard 33 mm
Station Tools
0,8 mm (.032") to 10 mm (.394")**

Pos.	Tool Description	 Round	 Standard Shapes	 O.D. Ground Special Shapes	 EDM required Special Shapes
	Complete set	(p/n: 2W1301)	(p/n: 2W1300)	(p/n: 2W530G)	(p/n: 2W530E)
1	Punch	(p/n: 201301)	(p/n: 201300)	(p/n: 21530G)	(p/n: 21530E)
2	Stripper - standard	(p/n: 210301)	(p/n: 210300)	(p/n: 21730G)	(p/n: 21730E)
2.1	Stripper - polypunch	(p/n: 211301)	(p/n: 211300)	(p/n: 21830G)	(p/n: 21830E)
3	Die - standard	(p/n: 206301)	(p/n: 206300)	(p/n: 21630G)	(p/n: 21630E)
3.1	Die - reinforced	(p/n: 209301)	(p/n: 209300)	(p/n: 2163VG)	(p/n: 2163VE)

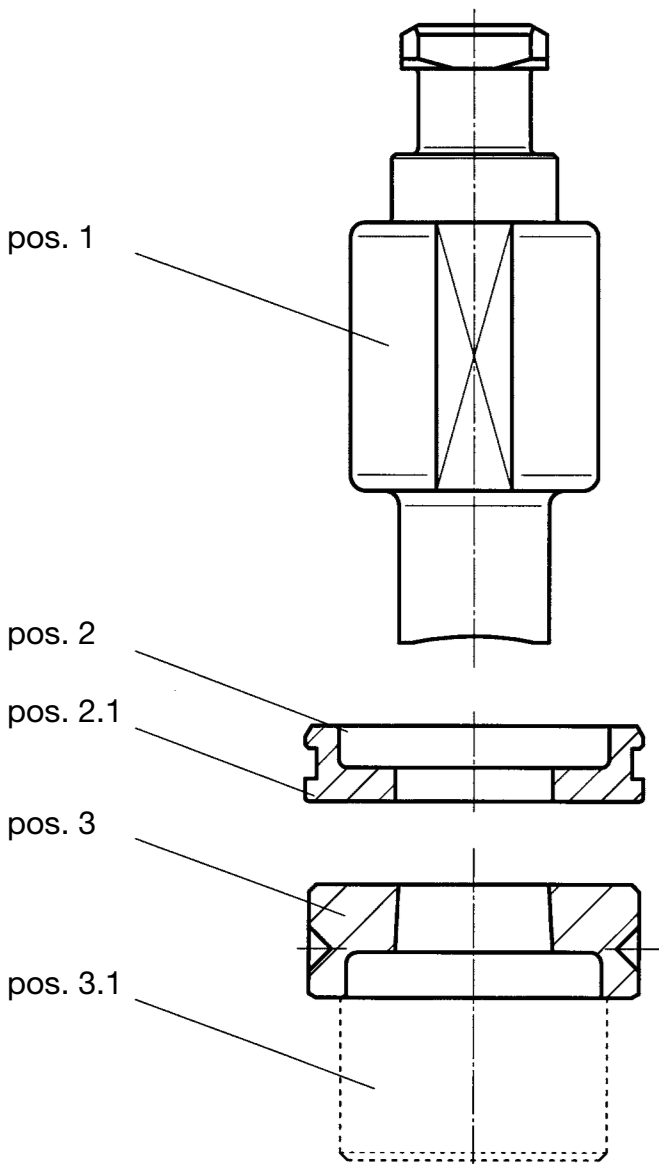
Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - Standard Tools

10,01 mm (.394") to 33 mm (1.300")



For machines with
brush-table system


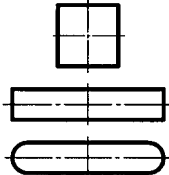
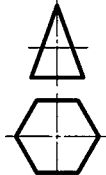
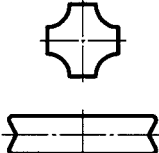
For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1

Unless otherwise specified, punches sized 11 mm (.433") or larger come standard with R 40 mm shear.



**Standard 33 mm
Station Tools
10,01 mm(.394") to 33 mm (1.300")**

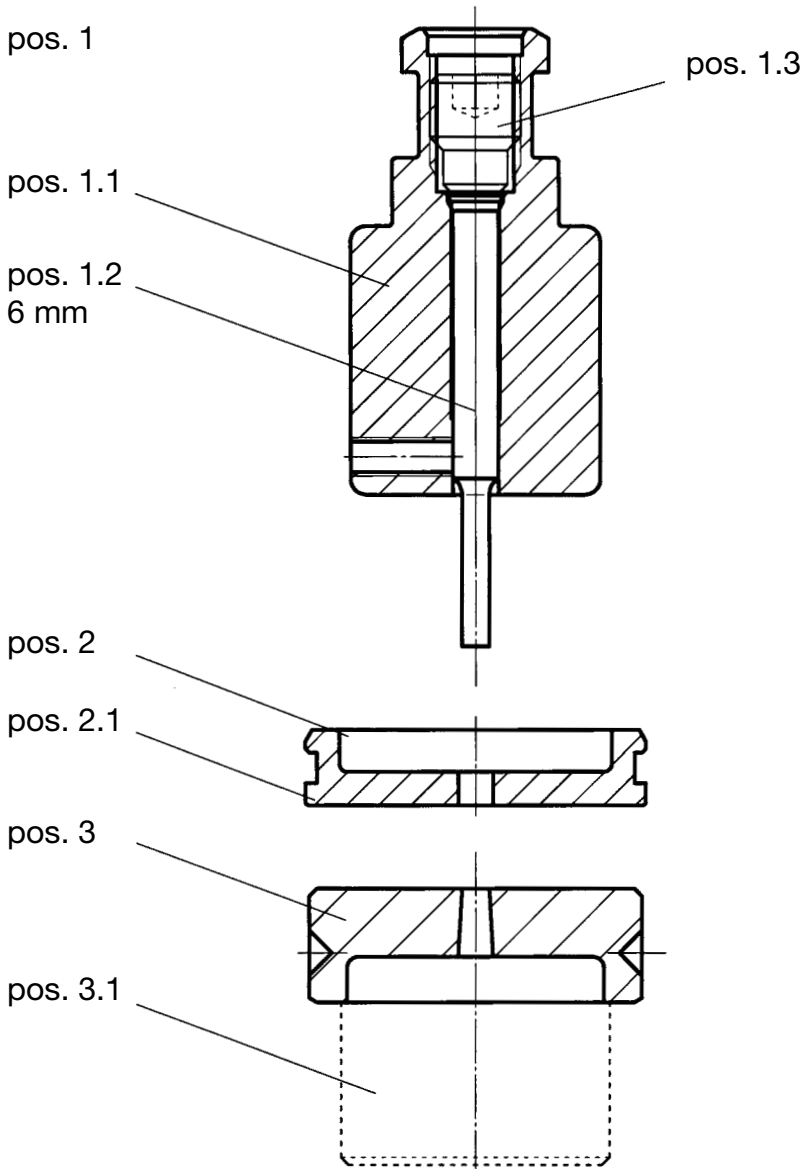
Pos.	Tool Description	 Round	 Standard Shapes	 O.D. Ground Special Shapes	 EDM required Special Shapes
	Complete set	(p/n: 2W1311)	(p/n: 2W1310)	(p/n: 2W531G)	(p/n: 2W531E)
1	Punch	(p/n: 201311)	(p/n: 201310)	(p/n: 21531G)	(p/n: 21531E)
2	Stripper - standard	(p/n: 210311)	(p/n: 210310)	(p/n: 21731G)	(p/n: 21731E)
2.1	Stripper - polypunch	(p/n: 211311)	(p/n: 211310)	(p/n: 21831G)	(p/n: 21831E)
3	Die - standard	(p/n: 206311)	(p/n: 206310)	(p/n: 21631G)	(p/n: 21631E)
3.1	Die - reinforced	(p/n: 209311)	(p/n: 209310)	(p/n: 2163V1G)	(p/n: 2163V1E)

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - "P1-System" (with replaceable inserts) 0,8 mm (.032") to 6 mm (.236")




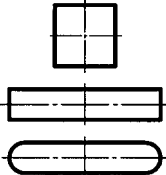
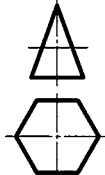
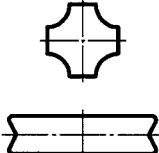
For machines with
brush-table system

For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1



P1-System
0,8 mm (.032") to 6 mm (.236")

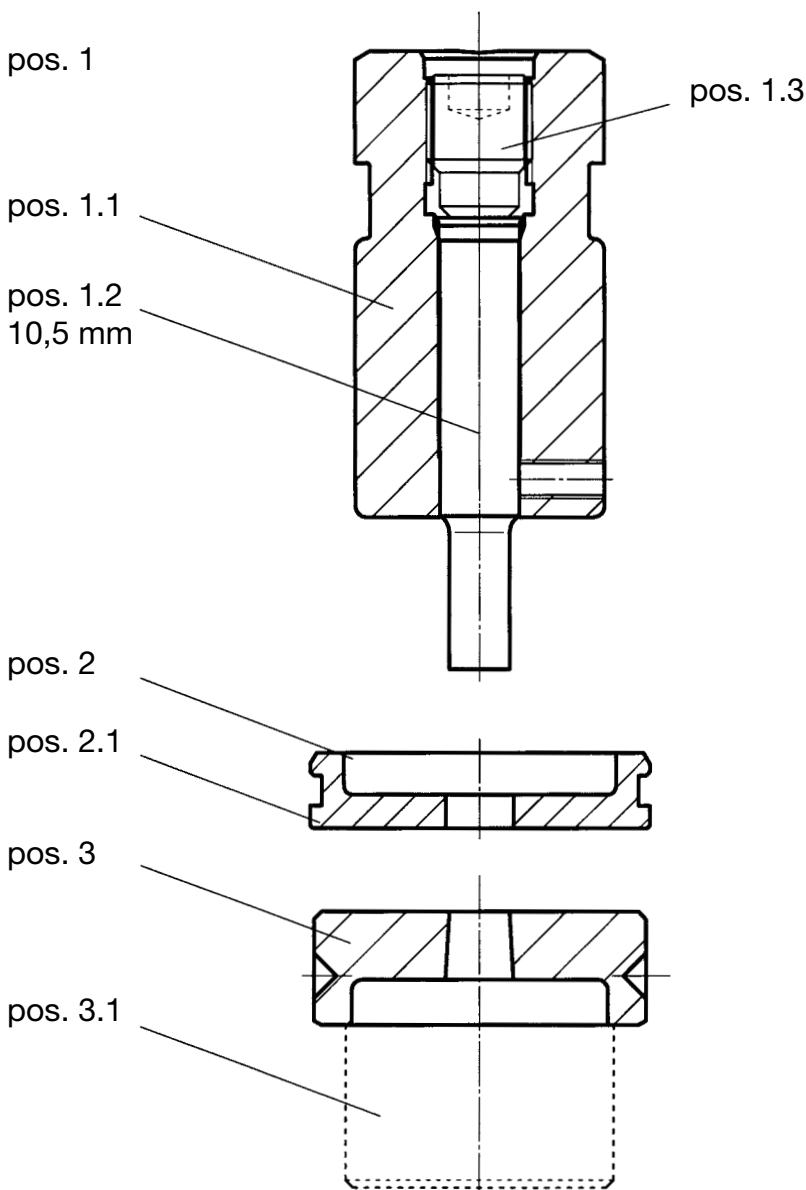
Pos.	Tool Description	 Round	 Standard Shapes	 O.D. Ground Special Shapes	 EDM required Special Shapes
	Complete set	(p/n: 2W1401)			
1	Complete punch assembly	(p/n: 201401)			
1.1	Punch-chuck body	(p/n: 219401)			
1.2	Punch insert	(p/n: 207P1A1)			
1.3	Set screw	(p/n: 219403)			
2	Stripper - standard	(p/n: 210301)			
2.1	Stripper - polypunch	(p/n: 211301)			
3	Die - standard	(p/n: 206301)			
3.1	Die - reinforced	(p/n: 209301)			

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - "P1-System" (with replaceable inserts) 6,01 mm (.237") to 10.5 mm (.413")




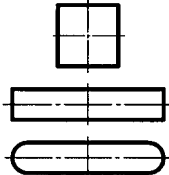
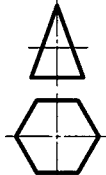
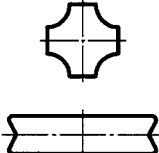
For machines with
brush-table system

For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1



P1-System
6,01 mm (.237") to 10,5 mm (.413")

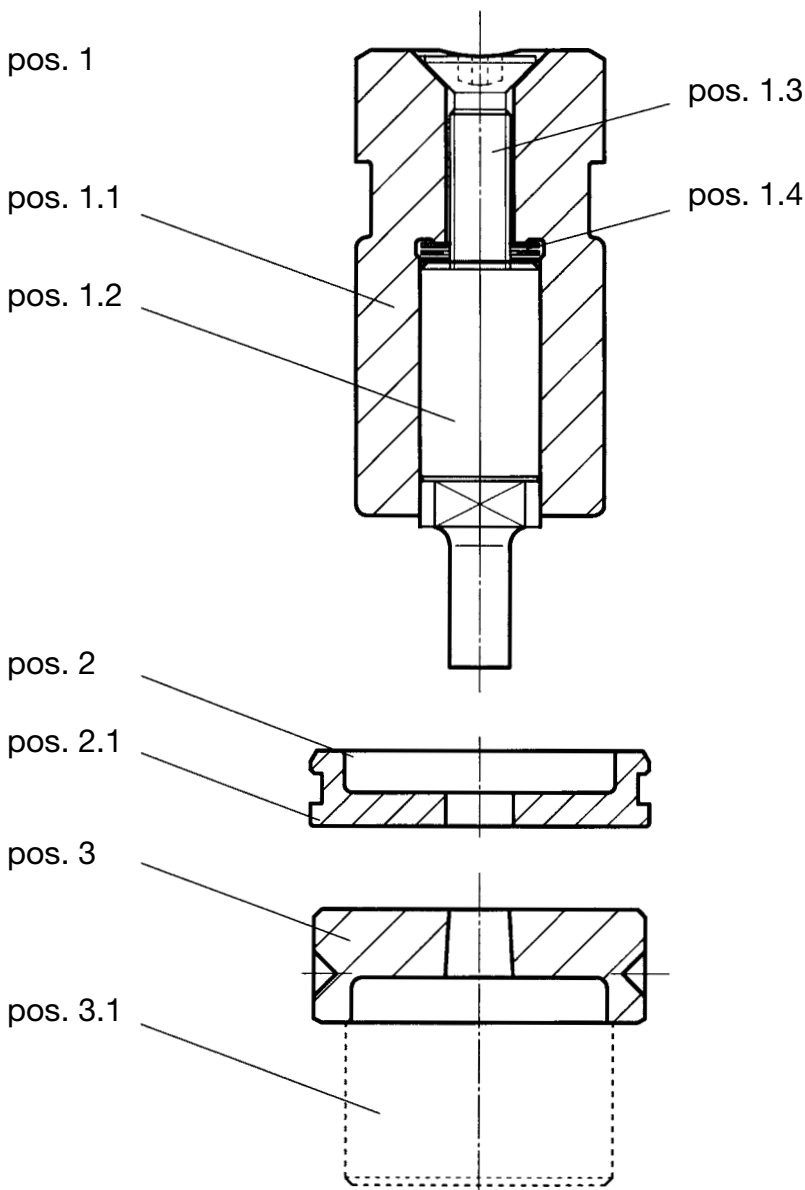
Pos.	Tool Description				
		Round	Standard Shapes	O.D. Ground Special Shapes	EDM required Special Shapes
	Complete set	(p/n: 2W1421)			
1	Complete punch assembly	(p/n: 201421)			
1.1	Punch-chuck body	(p/n: 219421)			
1.2	Punch insert	(p/n: 207P1B1)			
1.3	Set screw	(p/n: 219423)			
2	Stripper - standard	(p/n: 210301)			
2.1	Stripper - polypunch	(p/n: 211301)			
3	Die - standard	(p/n: 206301)			
3.1	Die - reinforced	(p/n: 209301)			

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - "P2-System" (with 2 mm additional grind life) 0,8 mm (.032") to 10 mm (.394")




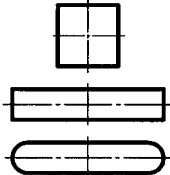
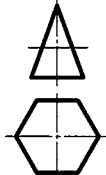
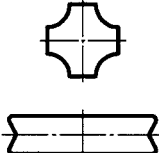
For machines with
brush-table system

For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1



P2-System
0,8 mm (.032") to 10 mm (.394")

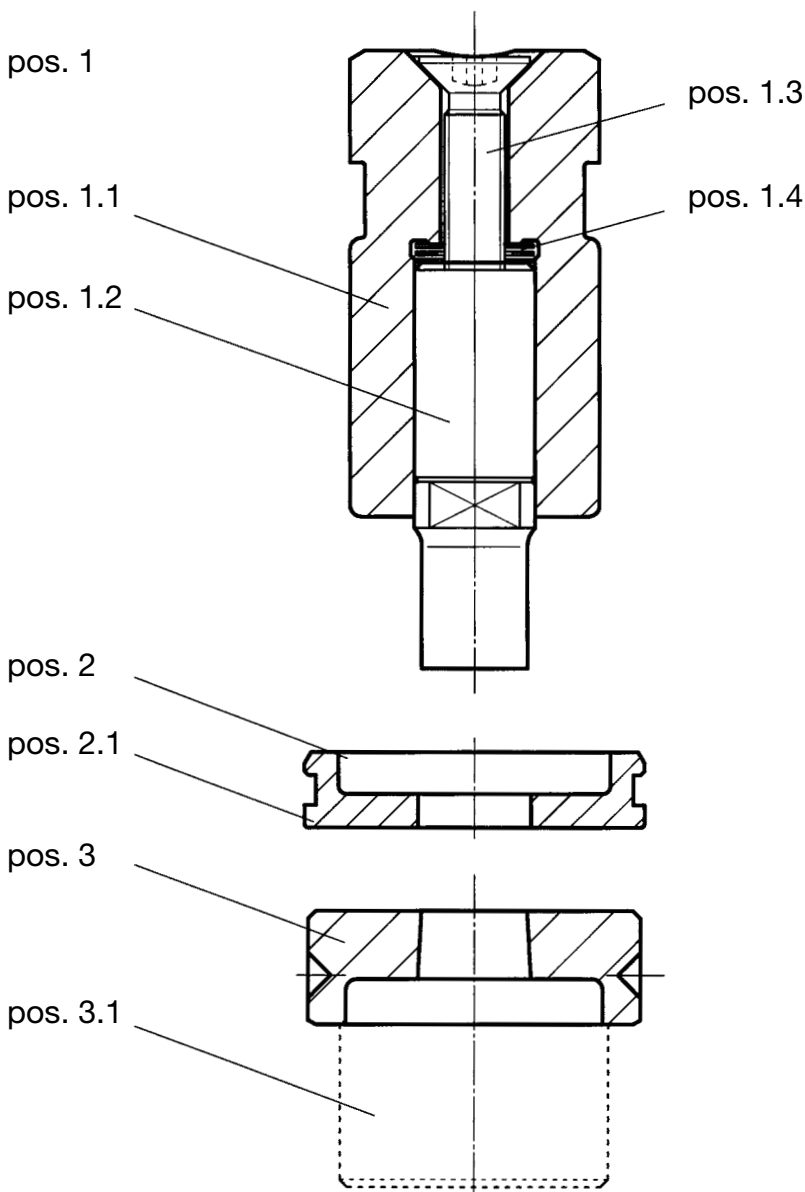
Pos.	Tool Description				
		Round	Standard Shapes	O.D. Ground Special Shapes	EDM required Special Shapes
	Complete set	(p/n: 2W1441)	(p/n: 2W1440)	(p/n: 2W544G)	(p/n: 2W544E)
1	Complete punch assembly	(p/n: 201441)	(p/n: 201440)	(p/n: 21544G)	(p/n: 21544E)
1.1	Punch-chuck body	(p/n: 219441)	(p/n: 219441)	(p/n: 219441)	(p/n: 219441)
1.2	Punch insert	(p/n: 207P2A1)	(p/n: 207P2A0)	(p/n: 207P2AG)	(p/n: 207P2AE)
1.3	Retaining screw	(p/n: 219444)	(p/n: 219444)	(p/n: 219444)	(p/n: 219444)
1.4	Shim kit (4 x 0.5 mm)	(p/n: 219443)	(p/n: 219443)	(p/n: 219443)	(p/n: 219443)
2	Stripper - standard	(p/n: 210301)	(p/n: 210300)	(p/n: 21730G)	(p/n: 21730E)
2.1	Stripper - polypunch	(p/n: 211301)	(p/n: 211300)	(p/n: 21830G)	(p/n: 21830E)
3	Die - standard	(p/n: 206301)	(p/n: 206300)	(p/n: 21630G)	(p/n: 21630E)
3.1	Die - reinforced	(p/n: 209301)	(p/n: 209300)	(p/n: 2163VG)	(p/n: 2163VE)

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - "P2-System" (with 2 mm additional grind life) 10,01 mm (.237") to 16 mm (.630")



For machines with
brush-table system


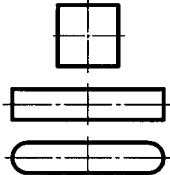
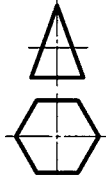
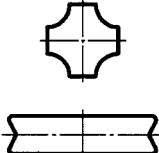
For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1

Unless otherwise specified, punches sized 11 mm (.433")
or larger come standard with R 40 mm shear.



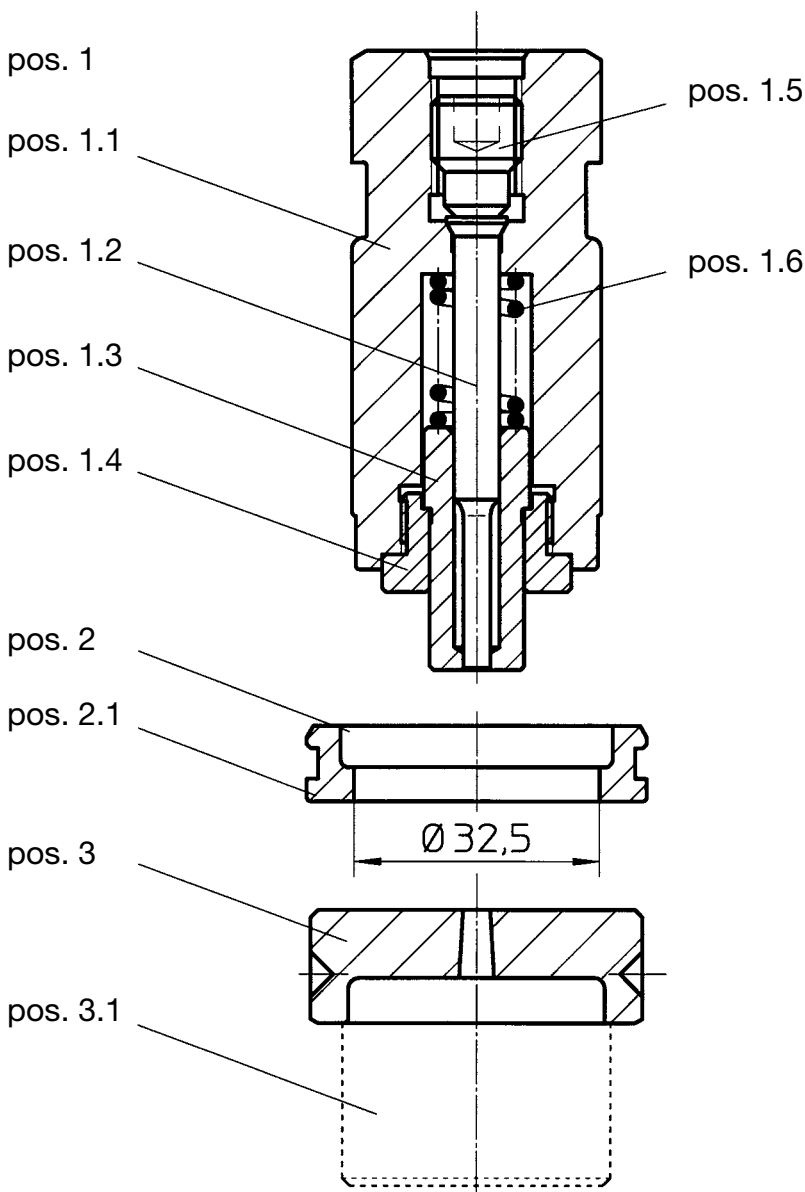
P2-System
10,01 mm (.394") to 16 mm (.630")

Pos.	Tool Description				
		Round	Standard Shapes	O.D. Ground Special Shapes	EDM required Special Shapes
	Complete set	(p/n:2W1451)	(p/n: 2W1450)	(p/n: 2W545G)	(p/n: 2W545E)
1	Complete punch assembly	(p/n: 201451)	(p/n: 201450)	(p/n: 21545G)	(p/n: 21545E)
1.1	Punch-chuck body	(p/n: 219451)	(p/n: 219451)	(p/n: 219451)	(p/n: 219451)
1.2	Punch insert	(p/n: 207P2B1)	(p/n: 207P2B0)	(p/n: 207P2BG)	(p/n: 207P2BE)
1.3	Retaining screw	(p/n: 219454)	(p/n: 219454)	(p/n: 219454)	(p/n: 219454)
1.4	Shim kit (4 x 0.5 mm)	(p/n: 219453)	(p/n: 219453)	(p/n: 219453)	(p/n: 219453)
2	Stripper - standard	(p/n: 210311)	(p/n: 210310)	(p/n: 21731G)	(p/n: 21731E)
2.1	Stripper - polypunch	(p/n: 211311)	(p/n: 211310)	(p/n: 21831G)	(p/n: 21831E)
3	Die - standard	(p/n: 206311)	(p/n: 206310)	(p/n: 21631G)	(p/n: 21631E)
3.1	Die - reinforced	(p/n: 209311)	(p/n: 209310)	(p/n: 2163V1G)	(p/n: 2163V1E)

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+

PASS - "P3-System"
(Fully Guided Punch)
up to 6 mm (.236")




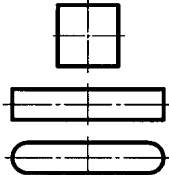
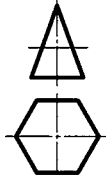
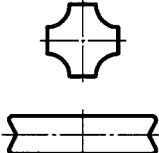
For machines with
 brush-table system

For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1



**P3-System
(Fully Guided Punch)
up to 6 mm (.236")**

Pos.	Tool Description	 Round	 Standard Shapes	 O.D. Ground Special Shapes	 EDM required Special Shapes
	Complete set	(p/n: 2W1501)			
1	Complete punch assembly	(p/n: 201501)			
1.1	Punch body	(p/n: 219501)			
1.2	Punch insert	(p/n: 207P3A1)			
1.3	Punch guide	(p/n: 219503)			
1.4	Retaining nut	(p/n: 219504)			
1.5	Retaining screw	(p/n: 219505)			
1.6	Spring	(p/n: 219506)			
2	Stripper - standard	(p/n: 210333)			
2.1	Stripper - polypunch	(p/n: 211333)			
3	Die - standard	(p/n: 206301)			
3.1	Die - reinforced	(p/n: 209301)			

Punch Coating Options

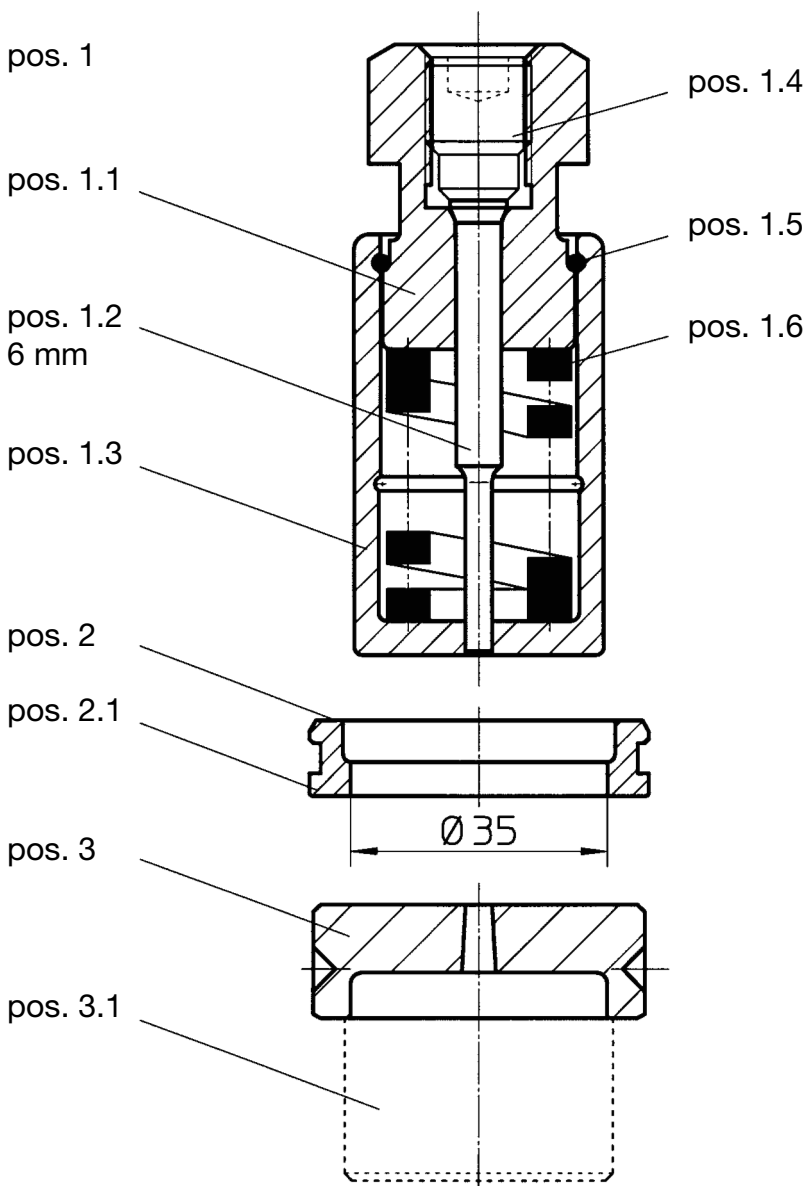
TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - "P4-System"

(Fully Guided Punch with Replaceable Standard Inserts)

from 0,8 mm (.032") to 6 mm (.236")




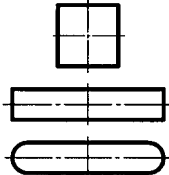
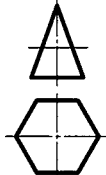
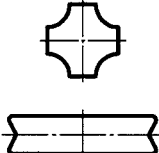
For machines with
brush-table system

For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
	74	66	58	54	50	46	42
70 x 90 23	73	65	57	53	49	45	41
	72	64	20	16	12	8	4
70 x 90 22	71	63	19	15	11	7	3
	70	62	18	14	10	6	2
90 x 90 21	69	61	17	13	9	5	1



P4-System
0,8 mm (.032") to 6 mm (.236")

Pos.	Tool Description				
		Round	Standard Shapes	O.D. Ground Special Shapes	EDM required Special Shapes
	Complete set	(p/n: 2W1521)			
1	Complete punch assembly	(p/n:201521)			
1.1	Punch head	(p/n: 219521)			
1.2	Punch insert	(p/n: 207P4A1)			
1.3	Punch guide body	(p/n: 219525)			
1.4	Retaining screw	(p/n: 219528)			
1.5	Retaining ring	(p/n: 219527)			
1.6	Spring	(p/n: 219526)			
2	Stripper - standard	(p/n: 210335)			
2.1	Stripper - polypunch	(p/n: 211335)			
3	Die - standard	(p/n: 206301)			
3.1	Die - reinforced	(p/n: 209301)			

Punch Coating Options

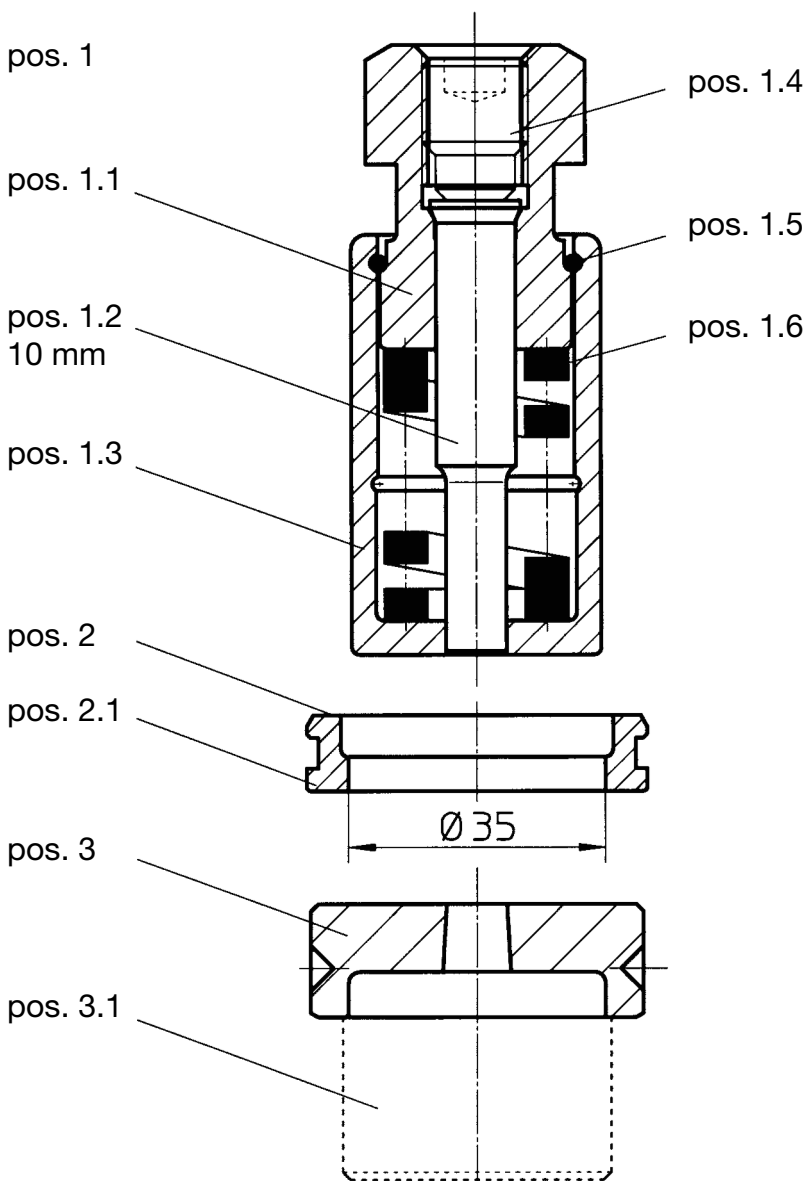
TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - "P4-System"

(Fully Guided Punch with Replaceable Standard Inserts)

from 6,01 mm (.237") to 10 mm (.394")




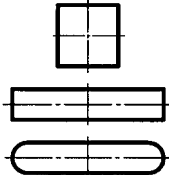
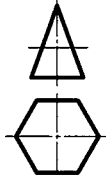
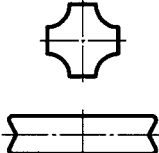
For machines with
brush-table system

For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
	74	66	58	54	50	46	42
70 x 90 23	73	65	57	53	49	45	41
	72	64	20	16	12	8	4
70 x 90 22	71	63	19	15	11	7	3
	70	62	18	14	10	6	2
90 x 90 21	69	61	17	13	9	5	1



P4-System
6,01 mm (.237") to 10 mm (.394")

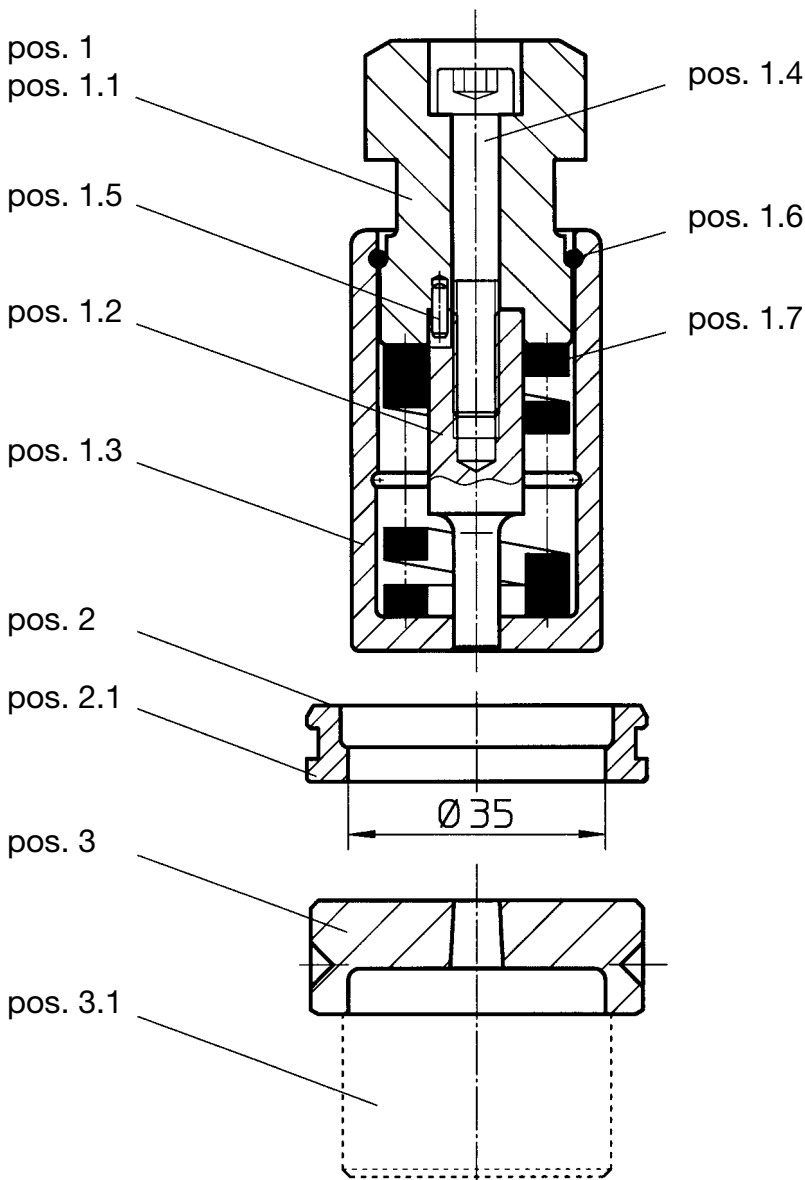
Pos.	Tool Description				
		Round	Standard Shapes	O.D. Ground Special Shapes	EDM required Special Shapes
	Complete set	(p/n: 2W1561)			
1	Complete punch assembly	(p/n: 201561)			
1.1	Punch head	(p/n: 219522)			
1.2	Punch insert	(p/n: 207P4B1)			
1.3	Punch guide body	(p/n: 219525)			
1.4	Retaining screw	(p/n: 219528)			
1.5	Retaining ring	(p/n: 219527)			
1.6	Spring	(p/n: 219526)			
2	Stripper - standard	(p/n: 210335)			
2.1	Stripper - polypunch	(p/n: 211335)			
3	Die - standard	(p/n: 206301)			
3.1	Die - reinforced	(p/n: 209301)			

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - "P5-System" (Fully Guided Punch with Salvagnini-style inserts) from 0,8 mm (.032") to 10 mm (.394")




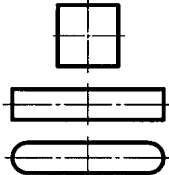
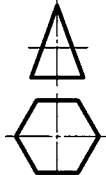
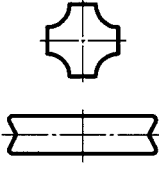
For machines with
brush-table system

For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
	74	66	58	54	50	46	42
70 x 90 23	73	65	57	53	49	45	41
	72	64	20	16	12	8	4
70 x 90 22	71	63	19	15	11	7	3
	70	62	18	14	10	6	2
90 x 90 21	69	61	17	13	9	5	1



P5-System
0,8 mm (.032") to 10 mm (.394")

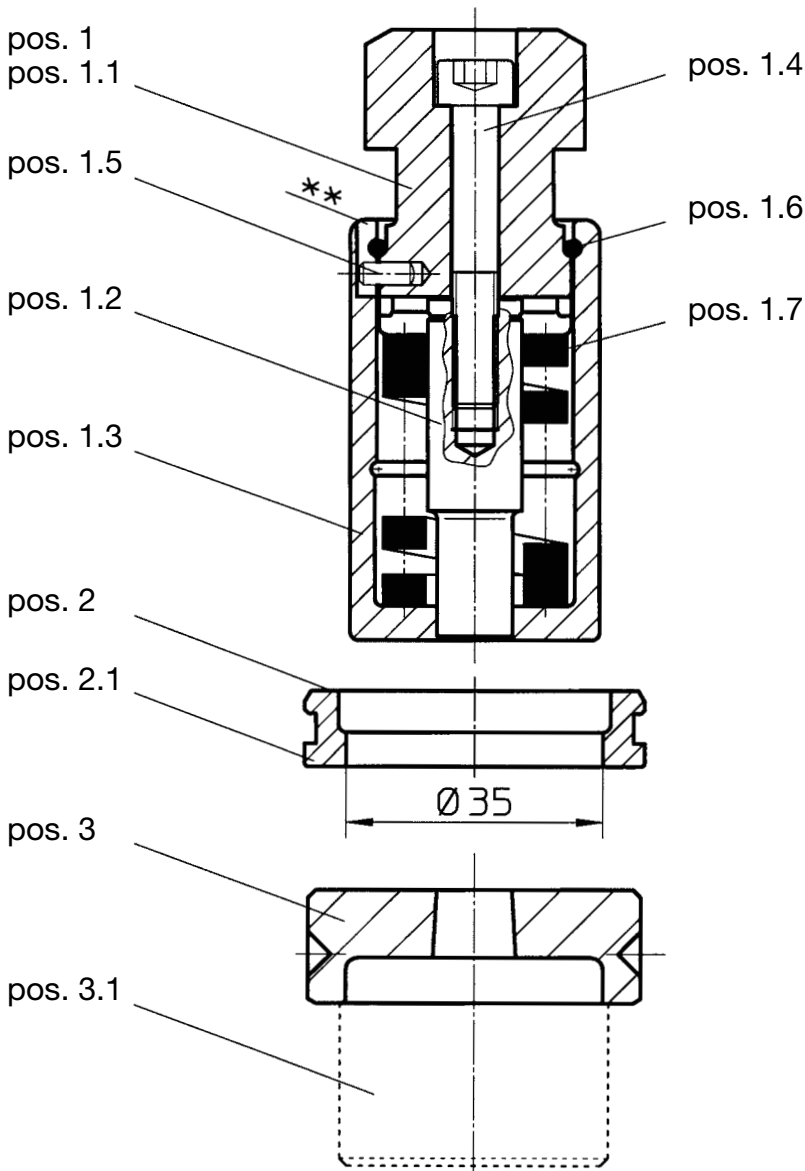
Pos.	Tool Description	 Round	 Standard Shapes	 O.D. Ground Special Shapes	 EDM required Special Shapes
	Complete set	(p/n: 2W1531)			
1	Complete punch assembly	(p/n: 201531)			
1.1	Punch head	(p/n: 219532)			
1.2	Punch insert	(p/n: 207P5A1)			
1.3	Punch guide body	(p/n: 219534)			
1.4	Retaining screw	(p/n: 219537)			
1.5	Alignment pin	(p/n: 219538)			
1.6	Retaining ring	(p/n: 219536)			
1.7	Spring	(p/n: 219535)			
2	Stripper - standard	(p/n: 210335)			
2.1	Stripper - polypunch	(p/n: 211335)			
3	Die - standard	(p/n: 206301)			
3.1	Die - reinforced	(p/n: 209301)			

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - "P6-System" (Fully Guided Punch with Salvagnini-style inserts) from 0,8 mm (.032") to 10 mm (.394")



For machines with
brush-table system


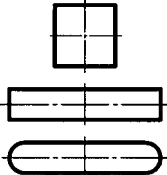
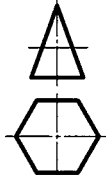
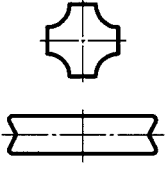
For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
	74	66	58	54	50	46	42
70 x 90 23	73	65	57	53	49	45	41
	72	64	20	16	12	8	4
70 x 90 22	71	63	19	15	11	7	3
	70	62	18	14	10	6	2
90 x 90 21	69	61	17	13	9	5	1

** guide pin for exact alignment with head



P6-System
0,8 mm (.032") to 10 mm (.394")

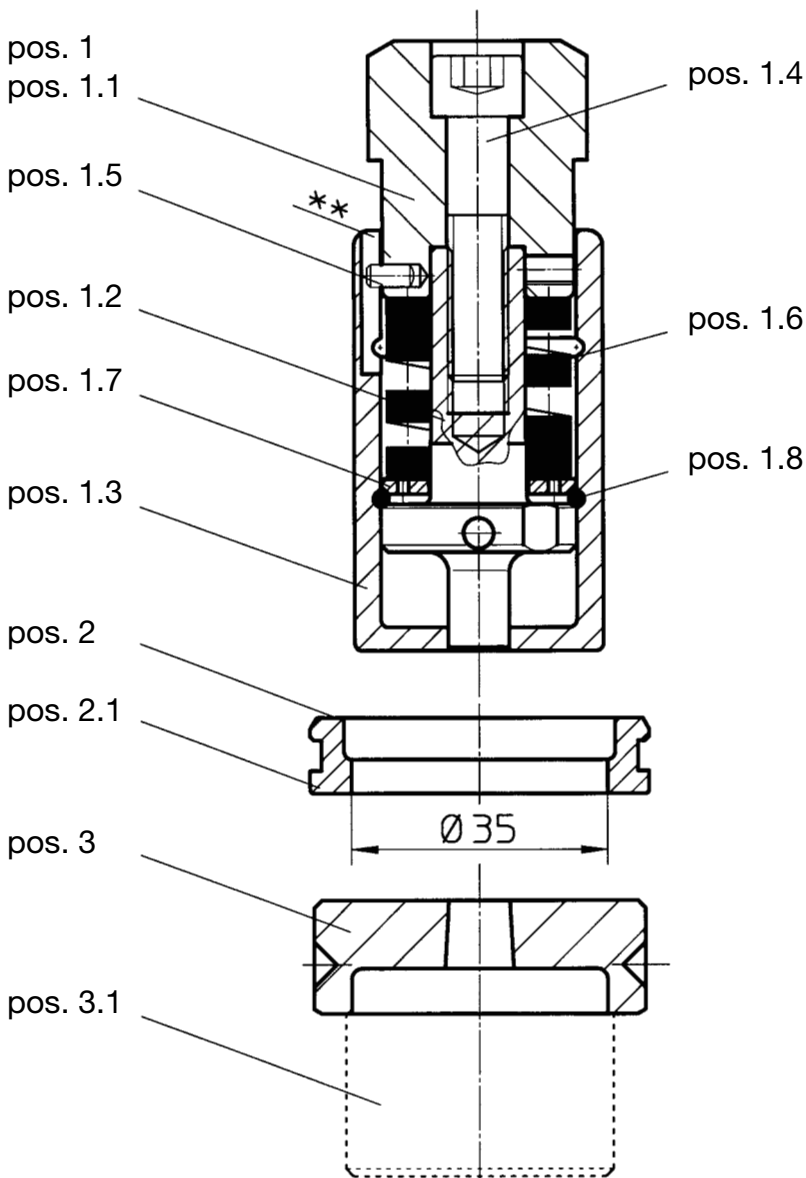
Pos.	Tool Description	 Round	 Standard Shapes	 O.D. Ground Special Shapes	 EDM required Special Shapes
	Complete set		(p/n: 2W1510)	(p/n: 2W151G)	(p/n: 2W151E)
1	Complete punch assembly		(p/n: 201510)	(p/n: 20151G)	(p/n: 20151E)
1.1	Punch head		(p/n: 219511)	(p/n: 219511)	(p/n: 219511)
1.2	Punch insert		(p/n: 207P6A0)	(p/n: 207P6AG)	(p/n: 207P6AE)
1.3	Punch guide body		(p/n: 219510)	(p/n: 21951G)	(p/n: 21951E)
1.4	Retaining screw		(p/n: 219512)	(p/n: 219512)	(p/n: 219512)
1.5	Alignment pin		(p/n: 219513)	(p/n: 219513)	(p/n: 219513)
1.6	Retaining ring		(p/n: 219514)	(p/n: 219514)	(p/n: 219514)
1.7	Spring		(p/n: 219516)	(p/n: 219516)	(p/n: 219516)
2	Stripper - standard		(p/n: 210335)	(p/n: 210335)	(p/n: 210335)
2.1	Stripper - polypunch		(p/n: 211335)	(p/n: 211335)	(p/n: 211335)
3	Die - standard		(p/n: 206300)	(p/n: 21630G)	(p/n: 21630E)
3.1	Die - reinforced		(p/n: 209300)	(p/n: 2163VG)	(p/n: 2163VE)

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - "P7-System" (Fully Guided Punch System) 0,8 mm (.032") to 10 mm (.394")



For machines with
brush-table system


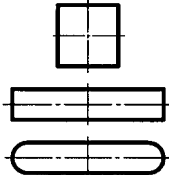
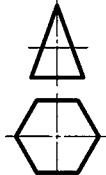
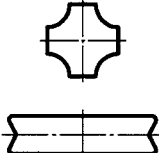
For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
	74	66	58	54	50	46	42
70 x 90 23	73	65	57	53	49	45	41
	72	64	20	16	12	8	4
70 x 90 22	71	63	19	15	11	7	3
	70	62	18	14	10	6	2
90 x 90 21	69	61	17	13	9	5	1

** guide pin for easy assembly



P7-System
0,8 mm (.032") to 10 mm (.394")

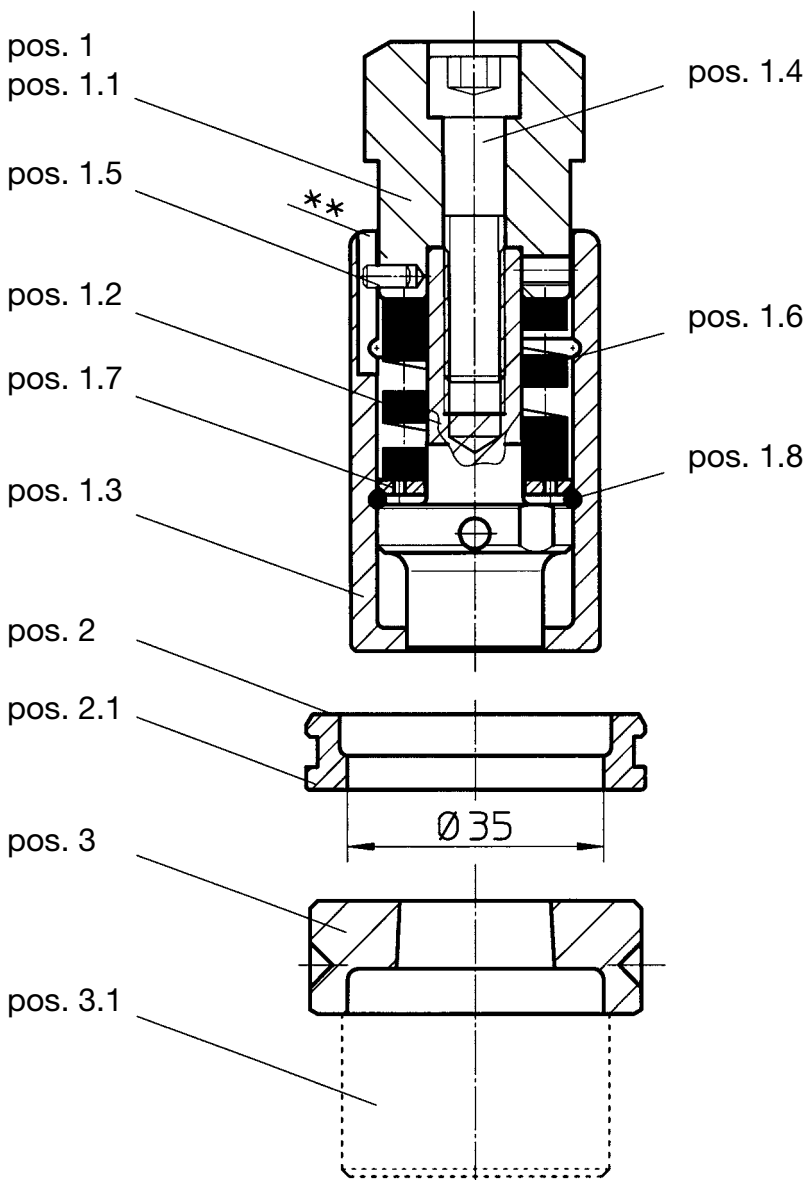
Pos.	Tool Description				
		Round	Standard Shapes	O.D. Ground Special Shapes	EDM required Special Shapes
	Complete set	(p/n: 2W1541)	(p/n: 2W1540_U)	(p/n: 2W154G)	(p/n: 2W154E)
1	Complete punch assembly	(p/n: 201541)	(p/n: 201540_U)	(p/n: 20154G)	(p/n: 20154E)
1.1	Punch head	(p/n: 219541)	(p/n: 219541)	(p/n: 219541)	(p/n: 219541)
1.2	Punch insert	(p/n: 207P7A1)	(p/n: 207P7A0_U)	(p/n: 207P7AG)	(p/n: 207P7AE)
1.3	Punch guide	(p/n: 219542)	(p/n: 219540)	(p/n: 21954G)	(p/n: 21954E)
1.4	Retaining body	(p/n: 219544)	(p/n: 219544)	(p/n: 219544)	(p/n: 219544)
1.5	Guide pin	(p/n: 219546)	(p/n: 219546)	(p/n: 219546)	(p/n: 219546)
1.6	Spring	(p/n: 219547)	(p/n: 219547)	(p/n: 219547)	(p/n: 219547)
1.7	Washer	(p/n: 219548)	(p/n: 219548)	(p/n: 219548)	(p/n: 219548)
1.8	Retaining ring	(p/n: 219549)	(p/n: 219549)	(p/n: 219549)	(p/n: 219549)
2	Stripper - standard	(p/n: 210335)	(p/n: 210335)	(p/n: 210335)	(p/n: 210335)
2.1	Stripper - polypunch	(p/n: 211335)	(p/n: 211335)	(p/n: 211335)	(p/n: 211335)
3	Die - standard	(p/n: 206301)	(p/n: 206300)	(p/n: 21630G)	(p/n: 21630E)
3.1	Die - reinforced	(p/n: 209301)	(p/n: 209300)	(p/n: 2163VG)	(p/n: 2163VE)

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - "P7-System" (Fully Guided Punch System) 10,01 mm (.394") to 26 mm (1.023")



For machines with
brush-table system

For Positions 1-20, 41-76, 7 tons


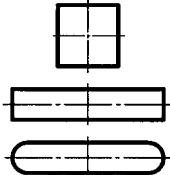
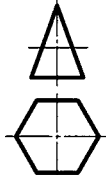
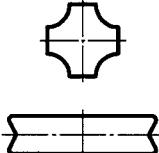
	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
	74	66	58	54	50	46	42
70 x 90 23	73	65	57	53	49	45	41
	72	64	20	16	12	8	4
70 x 90 22	71	63	19	15	11	7	3
	70	62	18	14	10	6	2
90 x 90 21	69	61	17	13	9	5	1

** guide pin for easy assembly

Unless otherwise specified, punches sized 11 mm (.433")
or larger come standard with R 40 mm shear.



P7-System
10,01 mm (.394") to 26 mm (1.023")

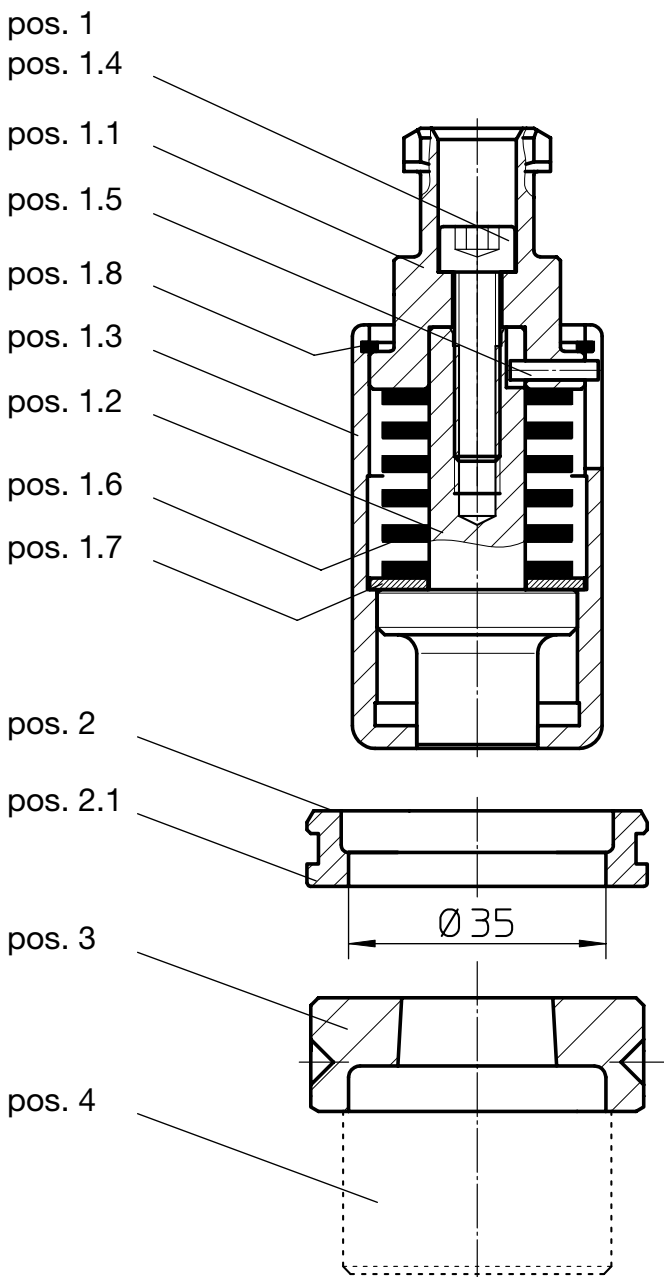
Pos.	Tool Description				
		Round	Standard Shapes	O.D. Ground Special Shapes	EDM required Special Shapes
	Complete set	(p/n: 2W1551)	(p/n: 2W1550_U)	(p/n: 2W155G)	(p/n: 2W155E)
1	Complete punch assembly	(p/n: 201551)	(p/n: 201550_U)	(p/n: 20155G)	(p/n: 20155E)
1.1	Punch head	(p/n: 219551)	(p/n: 219551)	(p/n: 219551)	(p/n: 219551)
1.2	Punch insert	(p/n: 207P7B1)	(p/n: 207P7B0_U)	(p/n: 207P7BG)	(p/n: 207P7BE)
1.3	Punch guide	(p/n: 219552)	(p/n: 219550)	(p/n: 21955G)	(p/n: 21955E)
1.4	Retaining body	(p/n: 219553)	(p/n: 219553)	(p/n: 219553)	(p/n: 219553)
1.5	Guide pin	(p/n: 219556)	(p/n: 219556)	(p/n: 219556)	(p/n: 219556)
1.6	Spring	(p/n: 219557)	(p/n: 219557)	(p/n: 219557)	(p/n: 219557)
1.7	Washer	(p/n: 219558)	(p/n: 219558)	(p/n: 219558)	(p/n: 219558)
1.8	Retaining ring	(p/n: 219559)	(p/n: 219559)	(p/n: 219559)	(p/n: 219559)
2	Stripper - standard	(p/n: 210335)	(p/n: 210335)	(p/n: 210335)	(p/n: 210335)
2.1	Stripper - polypunch	(p/n: 211335)	(p/n: 211335)	(p/n: 211335)	(p/n: 211335)
3	Die - standard	(p/n: 206311)	(p/n: 206310)	(p/n: 21631G)	(p/n: 21631E)
3.1	Die - reinforced	(p/n: 209311)	(p/n: 209310)	(p/n: 2163V1G)	(p/n: 2163V1E)

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+



PASS - "P9-System" (Fully Guided Punch System) 10,01 mm to 26,5 mm



For machines with
brush-table system


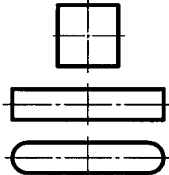
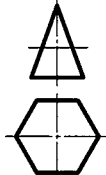
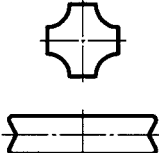
For Positions 1-20, 41-76, 7 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1

*Unless otherwise specified, punches sized 11 mm
or larger come standard with R 40 mm shear.*



P9-System
10,01 mm to 26,5 mm

Pos.	Tool Description				
		Round	Standard Shapes	O.D. Ground Special Shapes	EDM required Special Shapes
	Complete set	(p/n: 2W1571)	(p/n: 2W1570_U)	(p/n: 2W157G)	(p/n: 2W157E)
1	Complete punch assembly	(p/n: 201571)	(p/n: 201570_U)	(p/n: 20157G)	(p/n: 20157E)
1.1	Punch head	(p/n: 219572)	(p/n: 219572)	(p/n: 219572)	(p/n: 219572)
1.2	Punch insert	(p/n: 207P9B1)	(p/n: 207P9B0_U)	(p/n: 207P9BG)	(p/n: 207P9BE)
1.3	Punch guide	(p/n: 219571)	(p/n: 219570)	(p/n: 21957G)	(p/n: 21957E)
1.4	Retaining body	(p/n: 219573)	(p/n: 219573)	(p/n: 219573)	(p/n: 219573)
1.5	Guide pin	(p/n: 219576)	(p/n: 219576)	(p/n: 219576)	(p/n: 219576)
1.6	Spring	(p/n: 219577)	(p/n: 219577)	(p/n: 219577)	(p/n: 219577)
1.7	Washer	(p/n: 219578)	(p/n: 219578)	(p/n: 219578)	(p/n: 219578)
1.8	Retaining ring	(p/n: 219579)	(p/n: 219579)	(p/n: 219579)	(p/n: 219579)
2	Stripper - standard	(p/n: 210335)	(p/n: 210335)	(p/n: 210335)	(p/n: 210335)
2.1	Stripper - polypunch	(p/n: 211335)	(p/n: 211335)	(p/n: 211335)	(p/n: 211335)
3	Die - standard	(p/n: 206311)	(p/n: 206310)	(p/n: 21631G)	(p/n: 21631E)
3.1	Die - reinforced	(p/n: 209311)	(p/n: 209310)	(p/n: 2163V1G)	(p/n: 2163V1E)

Punch Coating Options

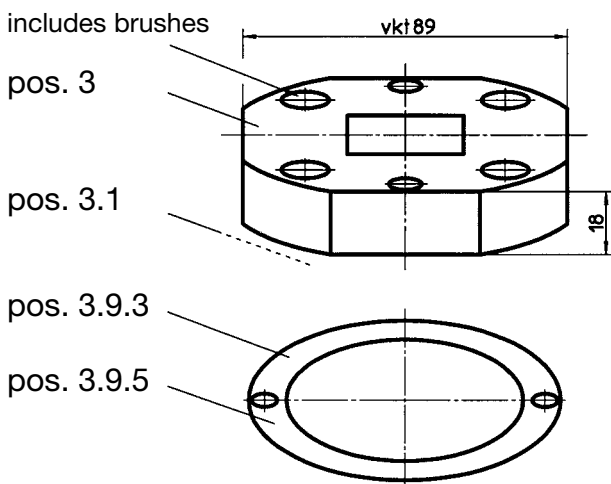
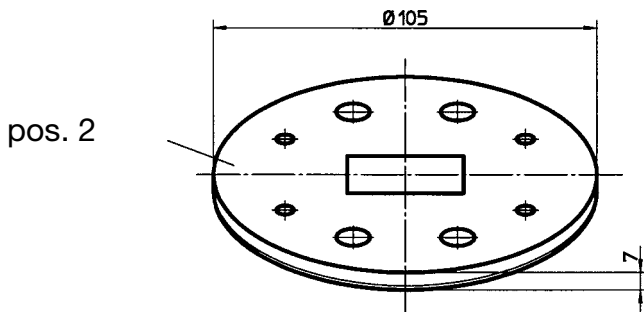
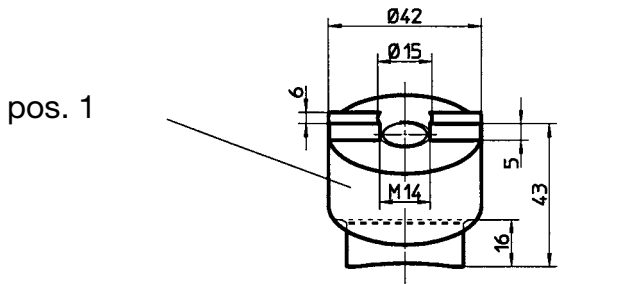
TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+

60 mm Station Tools

P30 - P35 Rotation-Station etc.

PASS - Standard Tools












**60 mm Rotator - Blank Holder Style (Type: PU; PR; P2R)
up to 42 mm (1.654")**




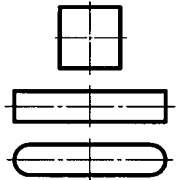
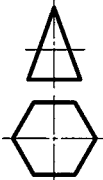
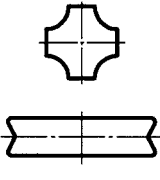
For machines with
brush-table system

For Positions 30-35, 12 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1

Shape Positions						
	Round	Square	Rect.	Obound	SF3	SF6
0°						
90°						
180°						
270°						

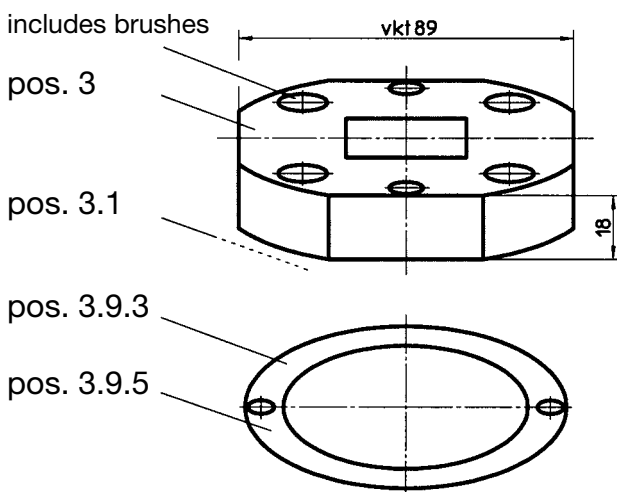
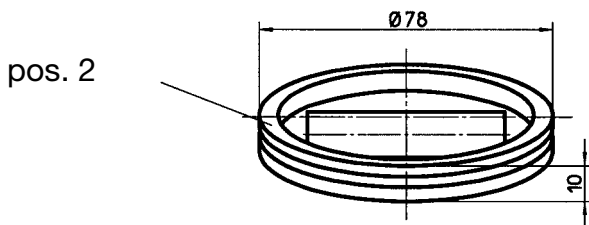
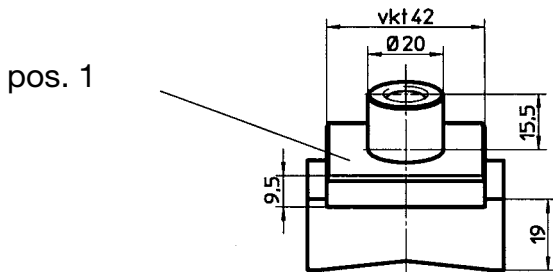
for 60 mm Rotator
Blank-holder style
to 42 mm (1.654")

Pos.	Tool Description	 Round	 Standard Shapes	 O.D. Ground Special Shapes	 EDM required Special Shapes
	Complete set	(p/n: 2W1L01)	(p/n: 2W1L00)	(p/n: 2W5L0G)	(p/n: 2W5L0E)
1	Punch	(p/n: 201L01)	(p/n: 201L00)	(p/n: 215L0G)	(p/n: 215L0E)
2	Stripper	(p/n: 210L01)	(p/n: 210L00)	(p/n: 217L0G)	(p/n: 217L0E)
3	Die - standard	(p/n: 206L01)	(p/n: 206L00)	(p/n: 216L0G)	(p/n: 216L0E)
3.1	Die reinforced	(p/n: 209L01)	(p/n: 209L00)	(p/n: 216VL0G)	(p/n: 216VL0E)
3.9.3	Shim kit t=0,3	(p/n: 203A01)	(p/n: 203A01)	(p/n: 203A01)	(p/n: 203A01)
3.9.5	Shim kit t=0,5	(p/n: 205A01)	(p/n: 205A01)	(p/n: 205A01)	(p/n: 205A01)

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+

PASS - Standard Tools
60 mm Rotator Station (Type: PU; PR; P2R)
up to 60 mm (2.362")




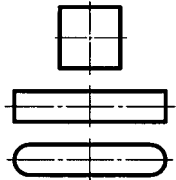
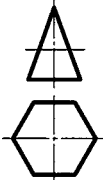
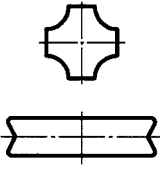
For machines with
brush-table system

For Positions 30-35, 12 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1

Shape Positions						
	Round	Square	Rect.	Obound	SF3	SF6
0°						
90°						
180°						
270°						

for 60 mm Rotator
to 60 mm (2.362")

Pos.	Tool Description	 Round	 Standard Shapes	 O.D. Ground Special Shapes	 EDM required Special Shapes
	Complete Set	(p/n: 2W1L11)	(p/n: 2W1L10)	(p/n: 2W5L1G)	(p/n: 2W5L1E)
1	Punch	(p/n: 201L11)	(p/n: 201L10)	(p/n: 215L1G)	(p/n: 215L1E)
2	Stripper	(p/n: 210L11)	(p/n: 210L10)	(p/n: 217L1G)	(p/n: 217L1E)
3	Die - standard	(p/n: 206L11)	(p/n: 206L10)	(p/n: 216L1G)	(p/n: 216L1E)
3.1	Die - reinforced	(p/n: 209L11)	(p/n: 209L10)	(p/n: 216VL1G)	(p/n: 216VL1E)
3.9.3	Shim set t=0,3	(p/n: 203A11)	(p/n: 203A11)	(p/n: 203A11)	(p/n: 203A11)
3.9.5	Shim set t=0,5	(p/n: 205A11)	(p/n: 205A11)	(p/n: 205A11)	(p/n: 205A11)

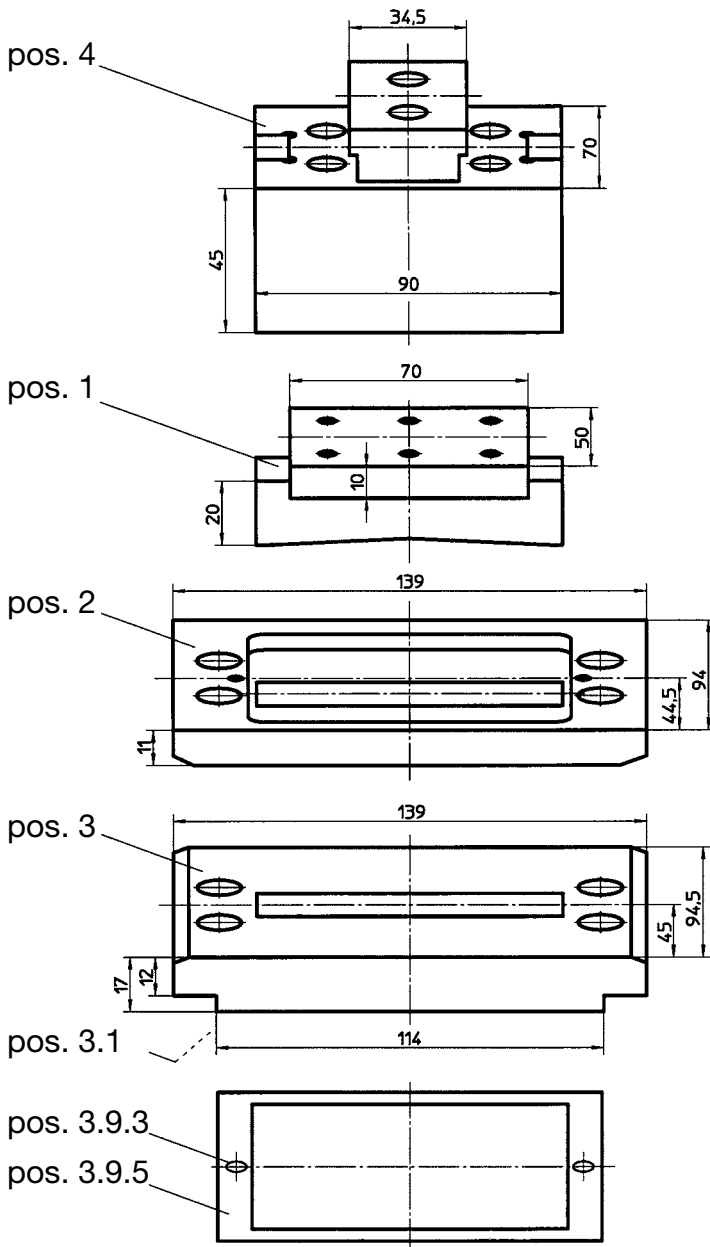
Punch Coating Options

TIN (titanium-nitride) +

TICN (titanium-carbon-nitrite) +

Oxide coating +

PASS - Standard Tools
70 mm x 90 mm 26 ton stations
Positions 22 & 23 (with 90 x 90)




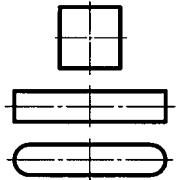
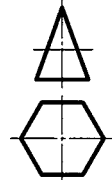
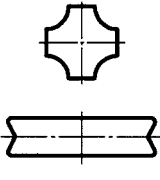
For machines with
brush-table system

For Positions 22 and 23, 26 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1

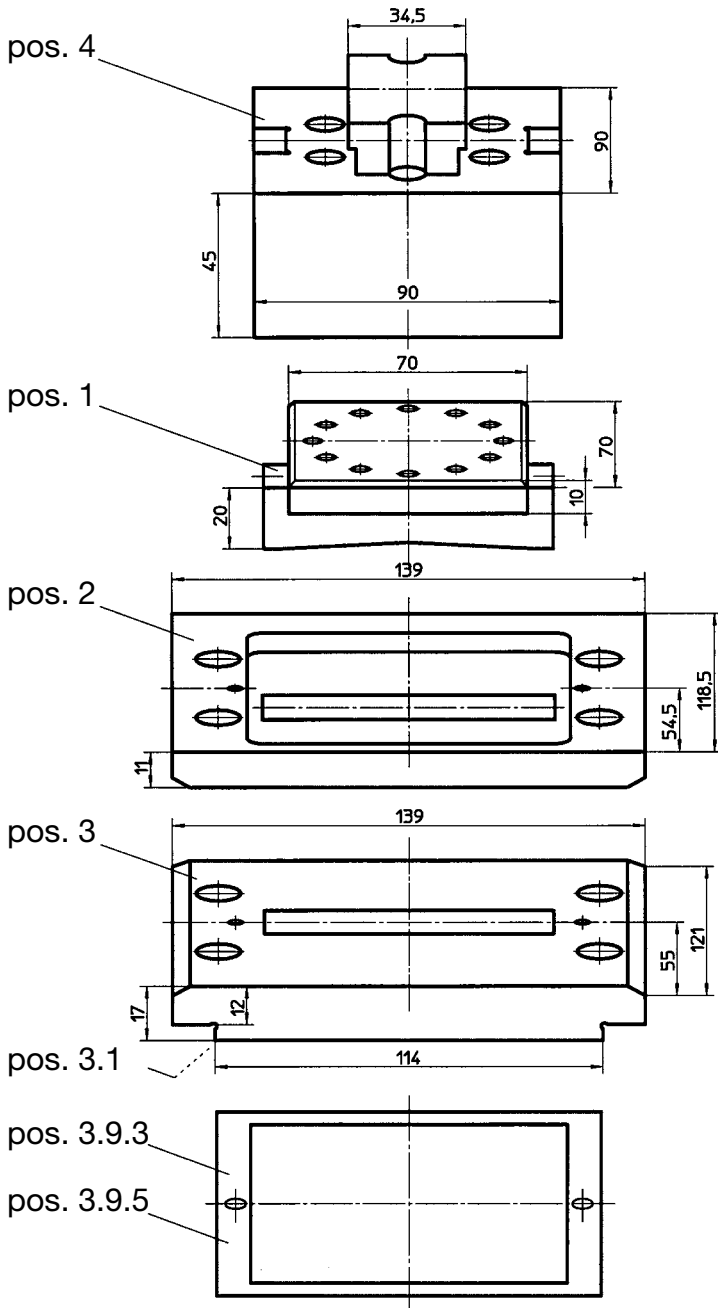
Shape Positions						
	Round	Square	Rect.	Obound	SF3	SF6
0°						
90°						
180°						
270°						

70 mm x 90 mm
26 ton stations
P22 & P23 with 90 x 90

Pos.	Tool Description	 Round	 Standard Shapes	 O.D. Ground Special Shapes	 EDM required Special Shapes
1,2,3	Complete set	(p/n: 2W1L61)	(p/n: 2W1L60)	(p/n: 2W5L6G)	(p/n: 2W5L6E)
4	Punch holder	(p/n: 200L61)	(p/n: 200L61)	(p/n: 200L61)	(p/n: 200L61)
1	Punch	(p/n: 201L61)	(p/n: 201L60)	(p/n: 215L6G)	(p/n: 215L6E)
2	Stripper	(p/n: 210L61)	(p/n: 210L60)	(p/n: 217L6G)	(p/n: 217L6E)
3	Die - standard	(p/n: 206L61)	(p/n: 206L60)	(p/n: 216L6G)	(p/n: 216L6E)
3.1	Die - reinforced	(p/n: 209L61)	(p/n: 209L60)	(p/n: 216VL6G)	(p/n: 216VL6E)
3.9.3	Shim t=0,3	(p/n: 203A06)	(p/n: 203A06)	(p/n: 203A06)	(p/n: 203A06)
3.9.5	Shim t=0,5	(p/n: 205A06)	(p/n: 205A06)	(p/n: 205A06)	(p/n: 205A06)

Punch Coating Options	
TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+

PASS - Standard Tools
90 mm x 90 mm 26 ton stations
Positions 21 & 24




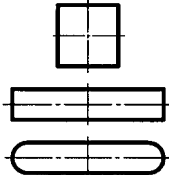
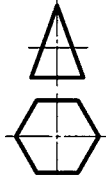
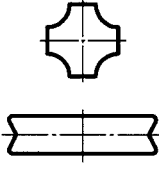
For machines with
brush-table system

For Positions 21 and 24, 26 tons

	30	31	32	33	34	35	
90 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
90 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1

Shape Positions						
	Round	Square	Rect.	Obound	SF3	SF6
0°						
90°						
180°						
270°						

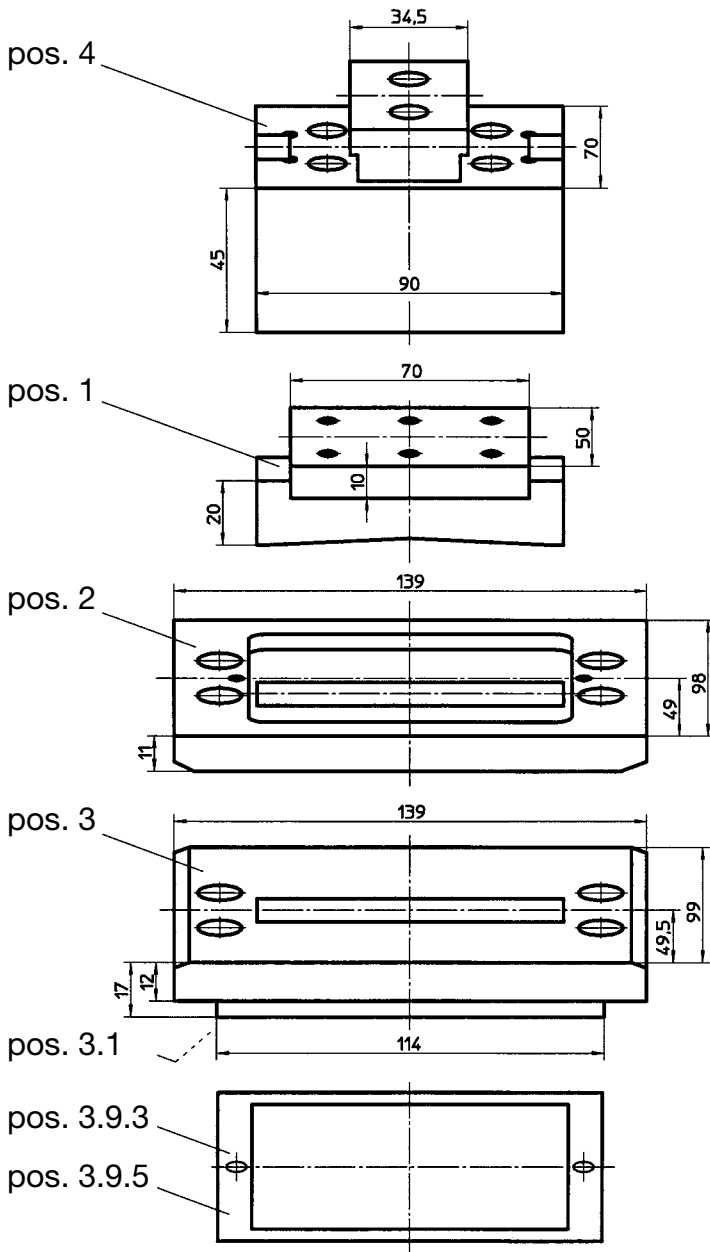
90 mm x 90 mm
26 ton stations
P21 & P24

Pos.	Tool Description	 Round	 Standard Shapes	 O.D. Ground Special Shapes	 EDM required Special Shapes
1,2,3	Complete set	(p/n: 2W1L71)	(p/n: 2W1L70)	(p/n: 2W5L7G)	(p/n: 2W5L7E)
4	Punch holder	(p/n: 200L71)	(p/n: 200L71)	(p/n: 200L71)	(p/n: 200L71)
1	Punch	(p/n: 201L71)	(p/n: 201L70)	(p/n: 215L7G)	(p/n: 215L7E)
2	Stripper	(p/n: 210L71)	(p/n: 210L70)	(p/n: 217L7G)	(p/n: 217L7E)
3	Die - standard	(p/n: 206L71)	(p/n: 206L70)	(p/n: 216L7G)	(p/n: 216L7E)
3.1	Die - reinforced	(p/n: 209L71)	(p/n: 209L70)	(p/n: 216VL7G)	(p/n: 216VL7E)
3.9.3	Shim t=0,3	(p/n: 203A07)	(p/n: 203A07)	(p/n: 203A07)	(p/n: 203A07)
3.9.5	Shim t=0,5	(p/n: 205A07)	(p/n: 205A07)	(p/n: 205A07)	(p/n: 205A07)

Punch Coating Options

TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+

PASS - Standard Tools
70 mm x 90 mm 26 ton stations
Positions 21 - 24 (without 90 x 90)




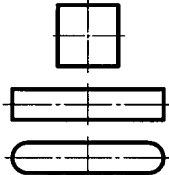
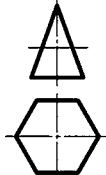
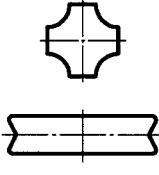
For machines with
brush-table system

For Positions 21 - 24, 26 tons

	30	31	32	33	34	35	
70 x 90 24	76	68	60	56	52	48	44
	75	67	59	55	51	47	43
70 x 90 23	74	66	58	54	50	46	42
	73	65	57	53	49	45	41
70 x 90 22	72	64	20	16	12	8	4
	71	63	19	15	11	7	3
70 x 90 21	70	62	18	14	10	6	2
	69	61	17	13	9	5	1

Shape Positions						
	Round	Square	Rect.	Obound	SF3	SF6
0°						
90°						
180°						
270°						

70 mm x 90 mm
26 ton stations
P21 & P24 (without 90 x 90)

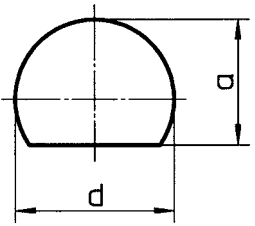
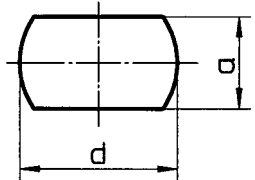
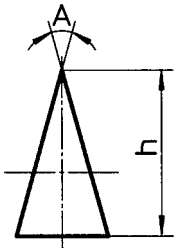
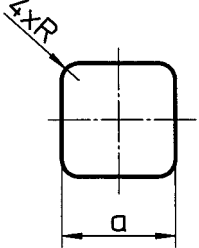
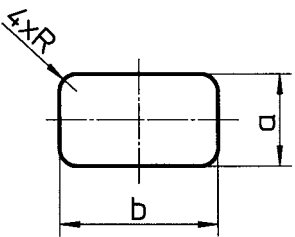
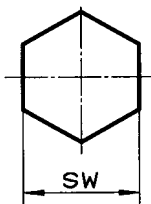
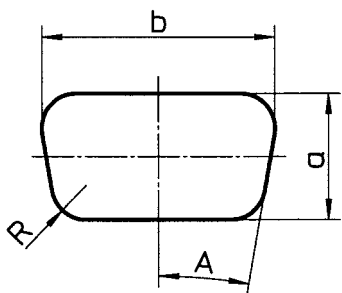
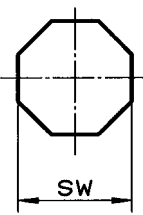
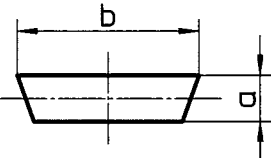
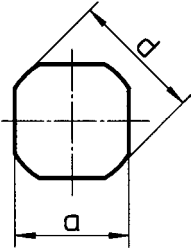
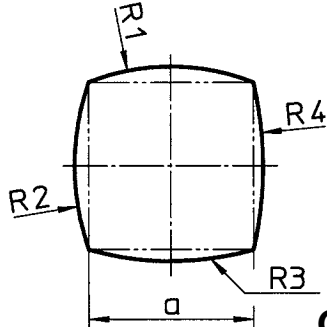
Pos.	Tool Description	 Round	 Standard Shapes	 O.D. Ground Special Shapes	 EDM required Special Shapes
1,2,3	Complete set	(p/n: 2W1L81)	(p/n: 2W1L80)	(p/n: 2W5L8G)	(p/n: 2W5L8E)
4	Punch holder	(p/n: 200L81)	(p/n: 200L81)	(p/n: 200L81)	(p/n: 200L81)
1	Punch	(p/n: 201L81)	(p/n: 201L80)	(p/n: 215L8G)	(p/n: 215L8E)
2	Stripper	(p/n: 210L81)	(p/n: 210L80)	(p/n: 217L8G)	(p/n: 217L8E)
3	Die - standard	(p/n: 206L81)	(p/n: 206L80)	(p/n: 216L8G)	(p/n: 216L8E)
3.1	Die - reinforced	(p/n: 209L81)	(p/n: 209L80)	(p/n: 216VL8G)	(p/n: 216VL8E)
3.9.3	Shim t=0,3	(p/n: 203A08)	(p/n: 203A08)	(p/n: 203A08)	(p/n: 203A08)
3.9.5	Shim t=0,5	(p/n: 205A08)	(p/n: 205A08)	(p/n: 205A08)	(p/n: 205A08)

Punch Coating Options	
TIN (titanium-nitride)	+
TICN (titanium-carbon-nitrite)	+
Oxide coating	+

Specials

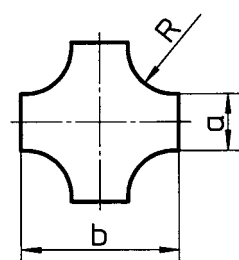
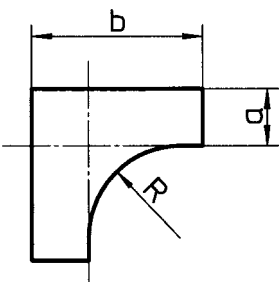
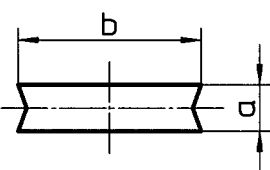
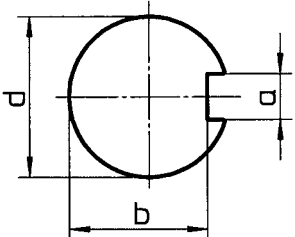
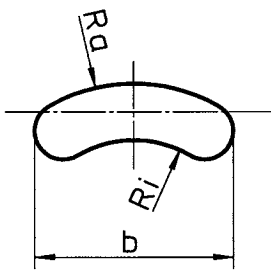
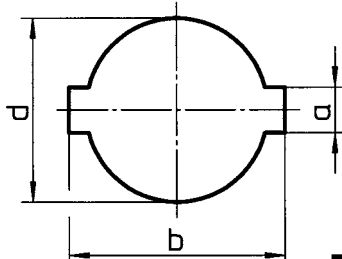
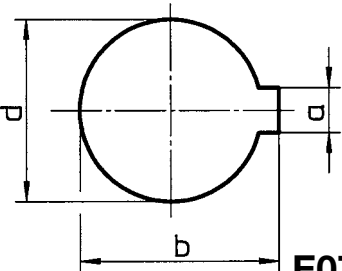
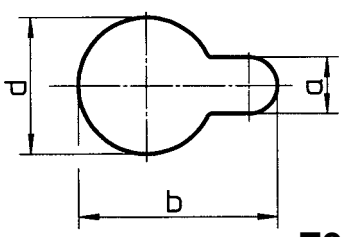
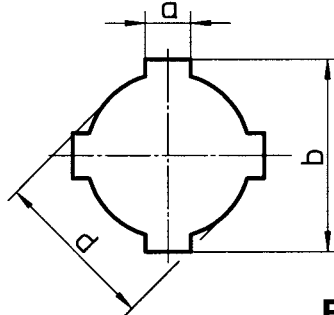
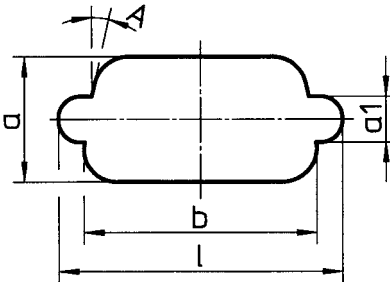
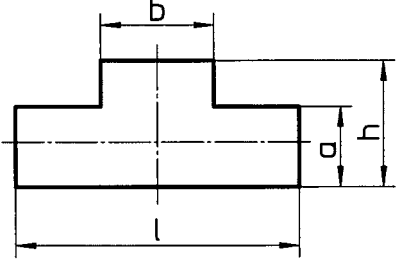
EXAMPLES

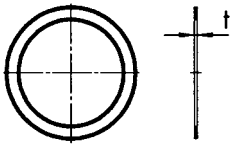
OD Grind - Special shapes (shape number: G _ _)

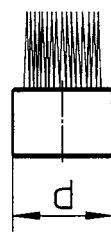
 <p style="text-align: right;">G01</p>	 <p style="text-align: right;">G02</p>	 <p style="text-align: right;">G03</p>
 <p style="text-align: right;">G04</p>	 <p style="text-align: right;">G05</p>	 <p style="text-align: right;">G06</p>
 <p style="text-align: right;">G07</p>	 <p style="text-align: right;">G08</p>	 <p style="text-align: right;">G09</p>
 <p style="text-align: right;">G10</p>	 <p style="text-align: right;">G11</p>	<p style="text-align: center;"><i>Please inquire for any other shapes not indicate in this page.</i></p>

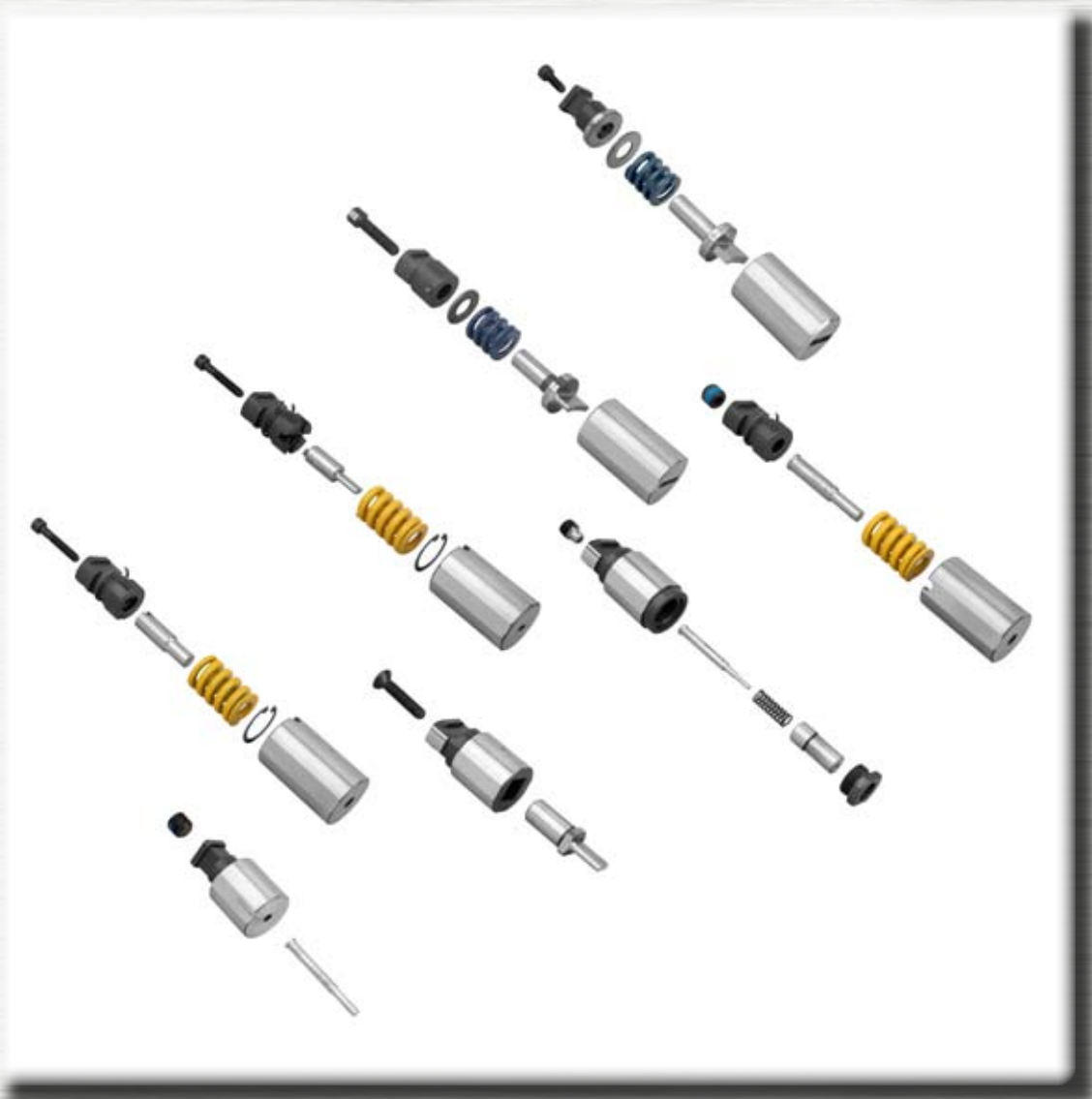
EXAMPLES

Sink-EDM - special shapes (shape number: E _ _)

 <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>	<p><i>Please inquire for any other shapes not indicate in this page.</i></p>

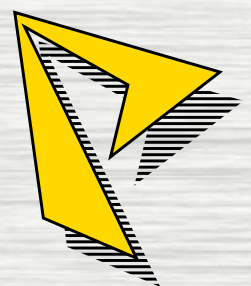
Die shims for Tool System 3			
Thickness "t"	p/n	Price pc.	Shims for the 33 mm station 
shim set containing (5) of each 0.1 mm, 0.3 mm & 0.5 mm	S3U1KT		
(1) 0.1 mm (1) 0.3 mm (1) 0.5 mm	203A31 203A33 203A35		

Brush inserts for strippers, dies and cassettes			
O.D. "d"	p/n	Price pc.	
13 mm 8 mm	200B00 200B01		



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