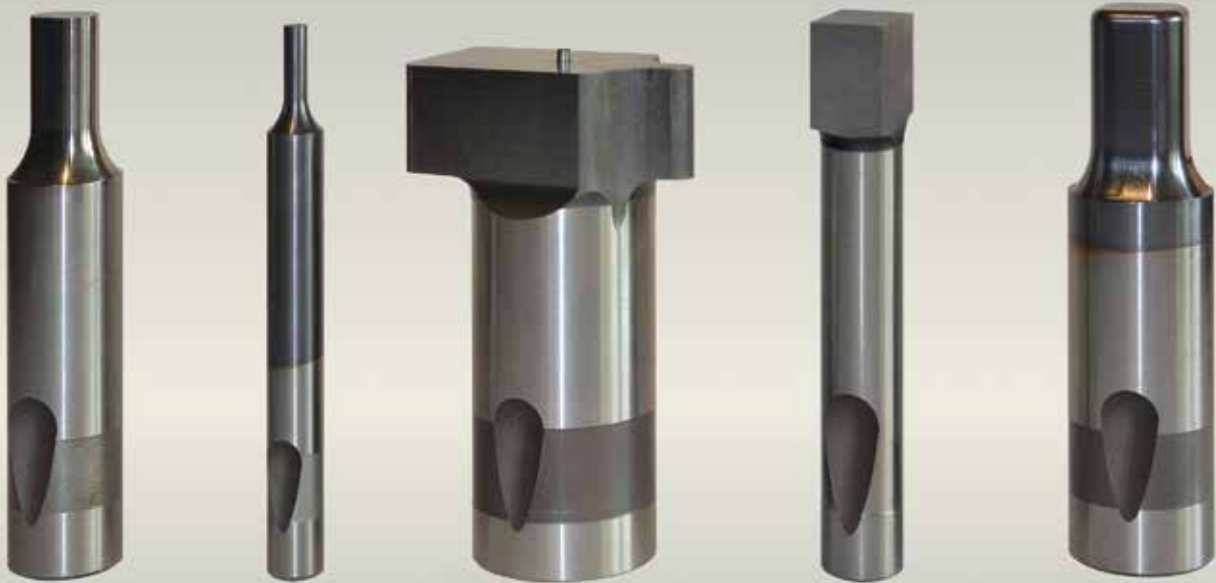




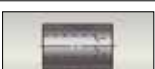
Märkische Stanz-Partner



**Schnellwechsel-Schneidelemente,
schwere Ausführung**

**Ball lock cutting elements,
heavy duty**

Stand / Revision Status 15.04.2019

	Schnellwechsel-Schneidelemente	Ball lock cutting elements	Best.-Nr. Order no.	Seite Page
	<u>Schnellwechsel-Schneidstempel, schwere Ausführung</u>	<u>Ball lock punches, heavy duty</u>	SE 300	SSE.4
	<u>Schnellwechsel-Schneidstempel, schwere Ausführung, mit federndem Auswerferstift</u>	<u>Ball lock punches, heavy duty, with spring ejector</u>	SE 320	SSE.5
	<u>Schnellwechsel-Schneidstempel, schwere Ausführung, abgesetzter Schaft</u>	<u>Ball lock punches, heavy duty, shouldered shank</u>	SE 301	SSE.6
	<u>Schnellwechsel-Schneidstempel, schwere Ausführung, abgesetzter Schaft, mit federndem Auswerferstift</u>	<u>Ball lock punches, heavy duty, shouldered shank, with spring ejector</u>	SE 321	SSE.7
	<u>Schnellwechsel-Schneidstempel, schwere Ausführung, abgesetzter Schaft Typen O, S, H, L</u>	<u>Ball lock punches, heavy duty, shouldered shank Types O, S, H, L</u>	SE 302 .	SSE.8
	<u>Schnellwechsel-Schneidstempel, schwere Ausführung, abgesetzter Schaft Typen O, S, H, L, mit fed. Auswerferstift</u>	<u>Ball lock punches, heavy duty, shouldered shank, Types O, S, H, L, with spring ejector</u>	SE 322 .	SSE.9
	<u>Schnellwechsel-Schneidstempel, schwere Ausführung, Schneide > Schaft</u>	<u>Ball lock punches, heavy duty, inverted</u>	SE 303	SSE.10
	<u>Schnellwechsel-Schneidstempel, schwere Ausführung, Schneide > Schaft, mit federndem Auswerferstift</u>	<u>Ball lock punches, heavy duty, inverted, with spring ejector</u>	SE 323	SSE.11
	<u>Schnellwechsel-Schneidstempel, schwere Ausführung, Schneide > Schaft, Typen O, S, H, L</u>	<u>Ball lock punches, heavy duty, inverted, Types O, S, H, L</u>	SE 304 .	SSE.12
	<u>Schnellwechsel-Schneidstempel, schw. Ausführung, Schneide > Schaft, Typen O, S, H, L, mit fed. Auswerferstift</u>	<u>Ball lock punches, heavy duty, inverted, Types O, S, H, L, with spring ejector</u>	SE 324 .	SSE.13
	<u>Schnellwechsel-Schneidbuchsen, leichte Ausführung, rund</u>	<u>Ball lock die buttons, light duty, round</u>	SE 340	SSE.14
	<u>Schnellwechsel-Schneidbuchsen, leichte Ausführung, Profile, Typen O, S, H, L</u>	<u>Ball lock die buttons, light duty, profiles, Types O, S, H, L</u>	SE 341 .	SSE.15
	<u>Stempelhalterplatten für Schnellwechsel-Schneidstempel</u>	<u>Retainer plates for ball lock punches</u>	SE 390	SSE.16
	<u>Entrigelungswerkzeuge für Stempelhalterplatten, abgewinkelte Ausführung</u>	<u>Release tools for ball lock punch retainers, angular</u>	SE 360	SSE.17
	<u>Entrigelungswerkzeuge für Stempelhalterplatten, gerade Ausführung</u>	<u>Release tools for ball lock punch retainers, straight</u>	SE 361	SSE.17
	<u>Entrigelungswerkzeuge für Stempelhalterplatten, Gewindeausführung</u>	<u>Release tools for ball lock punch retainers, threaded</u>	SE 362	SSE.17
	<u>Formbeispiele für Sonderschneidelemente</u>	<u>Shape examples for special cutting elements</u>		SSE.18
	<u>Bestellformular Sonderanfertigungen</u>	<u>Order form special shapes</u>		SSE.19

SE 300

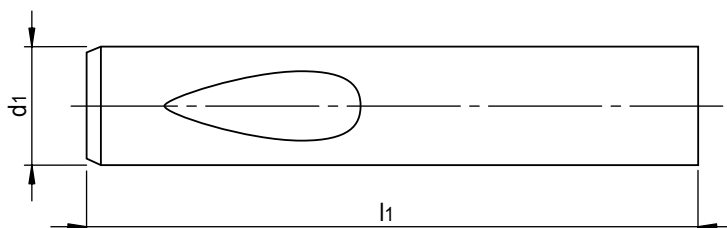
Schwere Ausführung

Mat.: HSS
Härte: 60 - 63 HRC

Heavy duty

Mat.: HSS (e.g. M2)
Hardness: 60 - 63 HRC

 SE 300 / 13 x 80



d1 g5	63	71	80	l1 +0,3 90	100	110	125
10	●	●	●	●	●	●	●
13	●	●	●	●	●	●	●
16	●	●	●	●	●	●	●
20	●	●	●	●	●	●	●
25		●	●	●	●	●	●
32		●	●	●	●	●	●
40			●	●	●	●	●

SE 320

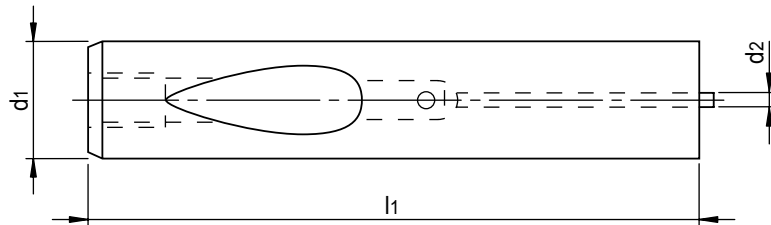
**Schwere Ausführung
mit federndem Auswerferstift**

Mat.: HSS
Härte: 60 - 63 HRC

**Heavy duty
with spring ejector**

Mat.: HSS (e.g. M2)
Hardness: 60 - 63 HRC

 **SE 320 / 13 x 80**



d1 g5	d2	63	71	80	l1 +0,3 90	100	110	125
10	1,5	●	●	●	●	●		
13	1,5	●	●	●	●	●	●	●
16	1,5	●	●	●	●	●	●	●
20	2,4	●	●	●	●	●	●	●
25	2,4		●	●	●	●	●	●
32	2,4		●	●	●	●	●	●
40	2,4			●	●	●	●	●

SE 301

Schwere Ausführung

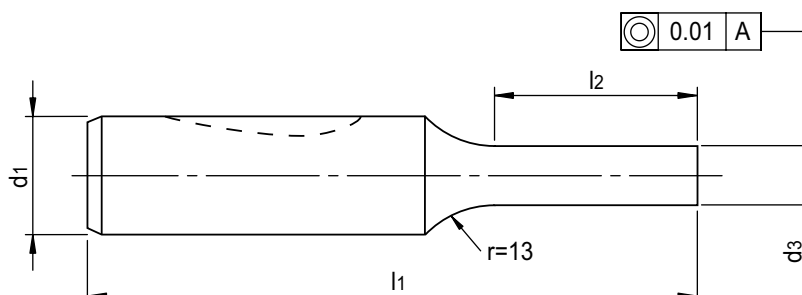
Mat.: HSS
Härte: 60 - 63 HRC

Heavy duty

Mat.: HSS (e.g. M2)
Hardness: 60 - 63 HRC



SE 301 /
20 x 19 x 80 / d3



d1 g5	d3 min. +0,01	l2 +1				l1 +0,3						
		10	13	19	25	63	71	80	90	100	110	125
10	2,1	●	●	●		●	●	●	●	●	●	●
13	5		●	●		●	●	●	●	●	●	●
16	8		●	●	●	●	●	●	●	●	●	●
20	12		●	●	●	●	●	●	●	●	●	●
25	16		●	●	●		●	●	●	●	●	●
32	24		●	●	●		●	●	●	●	●	●
40	30			●	●			●	●	●	●	●

SE 321

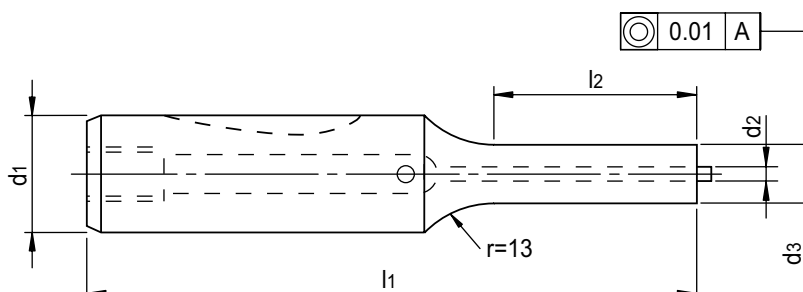
Schwere Ausführung
mit federndem Auswerferstift

Mat.: HSS
Härte: 60 - 63 HRC

Heavy duty
with spring ejector

Mat.: HSS (e.g. M2)
Hardness: 60 - 63 HRC

 **SE 321 /**
20 x 13 x 80 / d3



d1 g5	d2	d3 min. +0,01	l2 +1				l1 +0,3						
			10	13	19	25	63	71	80	90	100	110	125
10	1,5	2,1	●	●	●		●	●	●	●	●	●	
13	1,5	5		●	●		●	●	●	●	●	●	●
16	1,5	8		●	●	●	●	●	●	●	●	●	●
20	2,4	12		●	●	●	●	●	●	●	●	●	●
25	2,4	16		●	●	●		●	●	●	●	●	●
32	2,4	24		●	●	●		●	●	●	●	●	●
40	2,4	30			●	●			●	●	●	●	●

SE 302 .

Schwere Ausführung

Mat.: HSS
Härte: 60 - 63 HRC

Bei der Bestellung bitte die Position der Kugellage angeben (Bild 1).

Heavy duty

Mat.: HSS (e.g. M2)
Hardness: 60 - 63 HRC

When ordering, please specify the ball position (Fig. 1).

SE 302 O/ 20 x 19 x 80 / a x b / 45°

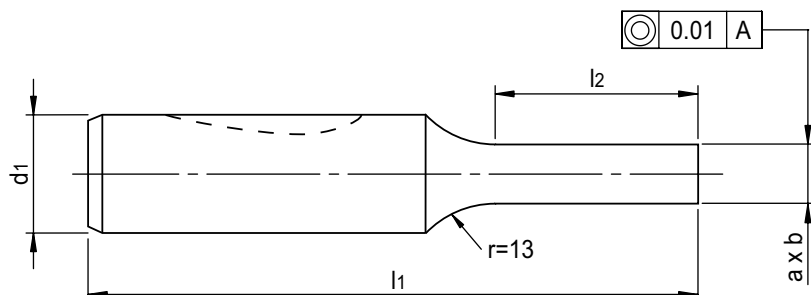
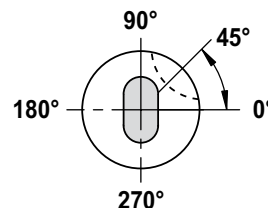
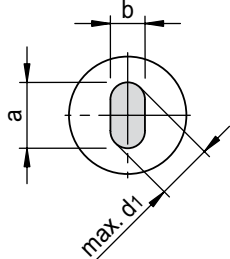


Bild 1/ Fig. 1

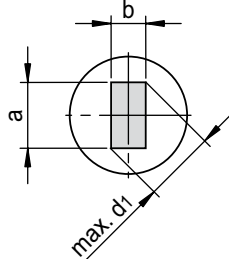


Typ / Type O



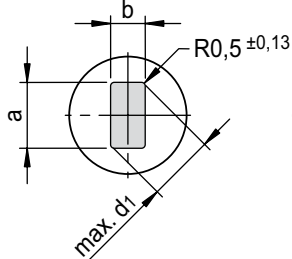
Langloch / oblong

Typ / Type S



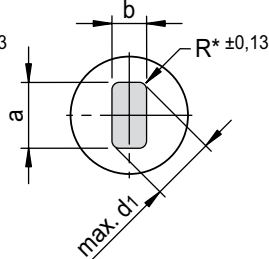
Quadrat, Rechteck / square, rectangular

Typ / Type H



Profil mit Radius R0,5 / Profile with radius R0,5

Typ / Type L



Profil mit frei wählbarem Radius / Profile with freely selectable radius

* Bei Typ L ist der Radius R frei wählbar. Bitte bei der Bestellung den Radius angeben.

* With type L the radius R is freely selectable. Please specify the radius when ordering.

d1 g5	a min. ±0,01	b min. ±0,01	l2 +1				l1 +0,3						
			10	13	19	25	63	71	80	90	100	110	125
10	2,1	2,1	●	●	●		●	●	●	●	●	●	●
13	5	4,5		●	●		●	●	●	●	●	●	●
16	8	6		●	●	●	●	●	●	●	●	●	●
20	12	8		●	●	●	●	●	●	●	●	●	●
25	16	10		●	●	●		●	●	●	●	●	●
32	24	12,5		●	●	●		●	●	●	●	●	●
40	30	14			●	●			●	●	●	●	●

SE 322 .

**Schwere Ausführung
mit federndem Auswerferstift**

**Heavy duty
with spring ejector**

**SE 322 O / 20 x 19 x
80 / a x b / 45°**

Mat.: HSS
Härte: 60 - 63 HRC

Mat.: HSS (e.g. M2)
Hardness: 60 - 63 HRC

Bei der Bestellung bitte die Position
der Kugellage angeben (Bild 1).

When ordering, please specify the
ball position (Fig. 1).

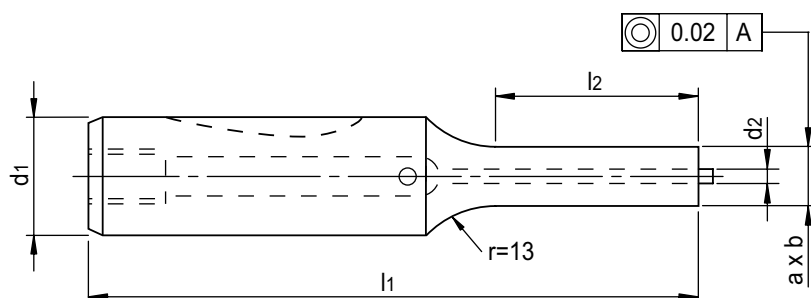
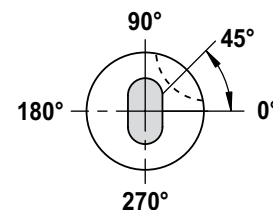
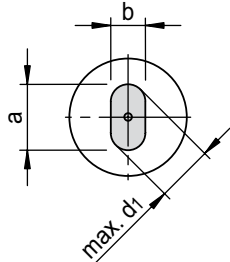


Bild 1/ Fig. 1

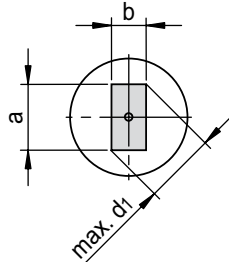


Typ / Type O



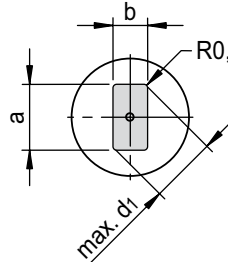
Langloch /
oblong

Typ / Type S



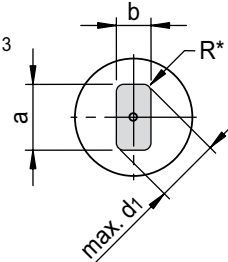
Quadrat, Rechteck /
square, rectangular

Typ / Type H



Profil mit Radius R0,5 /
Profile with radius R0,5

Typ / Type L



Profil mit frei wählbarem Radius /
Profile with freely selectable
radius

* Bei Typ L ist der
Radius R frei wählbar.
Bitte bei der Bestellung
den Radius angeben.

* With type L the radius R
is freely selectable.
Please specify the
radius when ordering.

d1 g5	d2	a min. ±0,01	b min. ±0,01	l2 +1				l1 +0,3						
				10	13	19	25	63	71	80	90	100	110	125
10	1,5	2,1	2,1	●	●	●		●	●	●	●	●	●	
13	1,5	5	4,5		●	●		●	●	●	●	●	●	●
16	1,5	8	6		●	●	●	●	●	●	●	●	●	●
20	2,4	12	8		●	●	●	●	●	●	●	●	●	●
25	2,4	16	10		●	●	●		●	●	●	●	●	●
32	2,4	24	12,5		●	●	●		●	●	●	●	●	●
40	2,4	30	14			●	●			●	●	●	●	●

SE 303

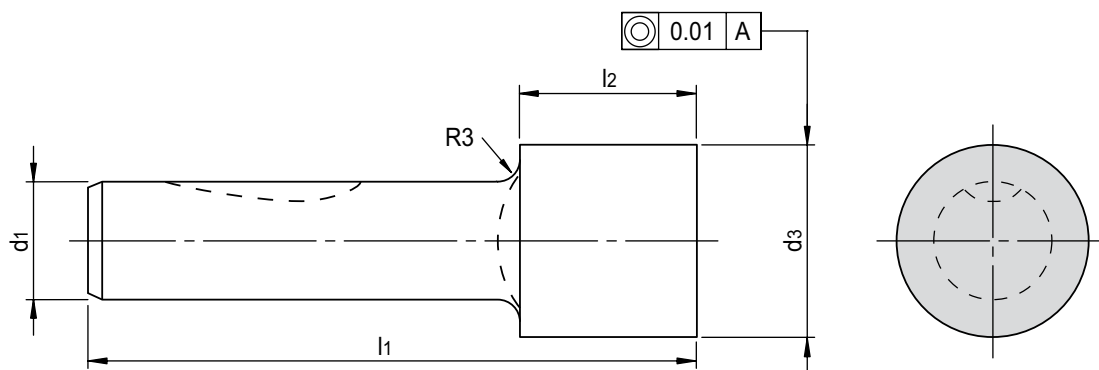
Schwere Ausführung

Mat.: HSS
Härte: 60 - 63 HRC

Heavy duty

Mat.: HSS (e.g. M2)
Hardness: 60 - 63 HRC

 SE 303 /
20 x 30 x 71 / d3



d1 g5	d3 min. +0,01	d3 max. +0,01	l2 +1		l1 +0,3			
			19	30	71	80	90	100
13	13,1	32	●	●	●	●	●	●
16	16,1	38	●	●	●	●	●	●
20	20,1	40	●	●	●	●	●	●
25	25,1	44	●	●	●	●	●	●
32	32,1	50	●	●		●	●	●
40	40,1	56	●	●		●	●	●

SE 323

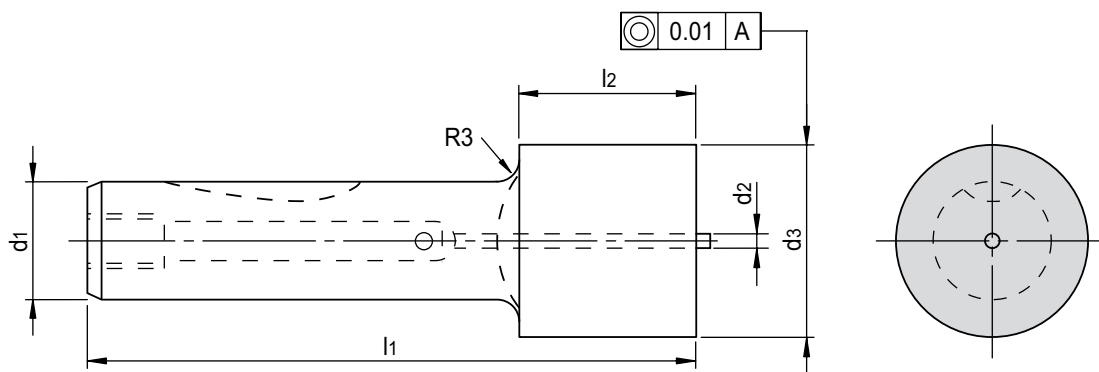
**Schwere Ausführung
mit federndem Auswerferstift**

Mat.: HSS
Härte: 60 - 63 HRC

**Heavy duty
with spring ejector**

Mat.: HSS (e.g. M2)
Hardness: 60 - 63 HRC

**SE 323 /
20 x 30 x 71 / d3**



d1 g5	d2	d3 min. +0,01	d3 max. +0,01	l2 +1		l1 +0,3			
				19	30	71	80	90	100
13	1,5	13,1	32	●	●	●	●	●	●
16	1,5	16,1	38	●	●	●	●	●	●
20	2,4	20,1	40	●	●	●	●	●	●
25	2,4	25,1	44	●	●	●	●	●	●
32	2,4	32,1	50	●	●		●	●	●
40	2,4	40,1	56	●	●		●	●	●

Ball lock punches, inverted

SCHNEIDELEMENTE / CUTTING ELEMENTS

SE 304 .

Schwere Ausführung

Mat.: HSS
Härte: 60 - 63 HRC

Bei der Bestellung bitte die Position der Kugellage angeben (Bild 1).

Heavy duty

Mat.: HSS (e.g. M2)
Hardness: 60 - 63 HRC

When ordering, please specify the ball position (Fig. 1).

SE 304 O/ 20 x 30 x 80 / a x b / 45°

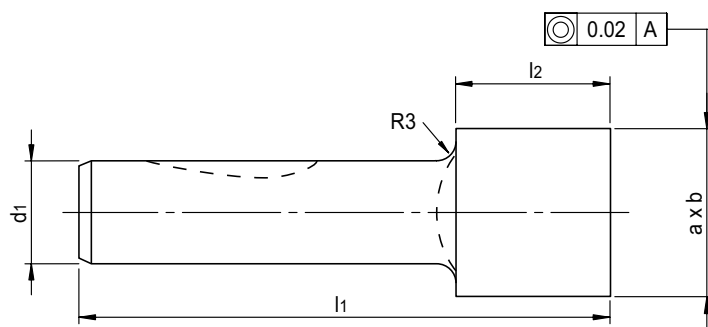
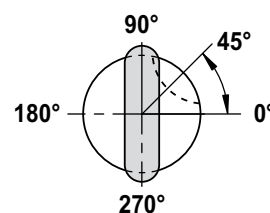
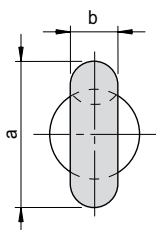


Bild 1/ Fig. 1

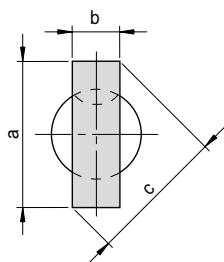


Typ / Type O



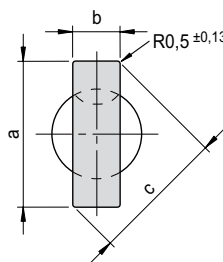
Langloch /
oblong

Typ / Type S



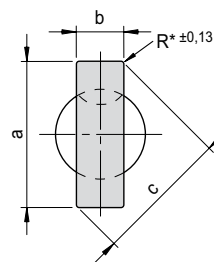
Quadrat, Rechteck /
square, rectangular

Typ / Type H



Profil mit Radius R0,5 /
Profile with radius R0,5

Typ / Type L



Profil mit frei wählbarem Radius /
Profile with freely selectable
radius

* Bei Typ L ist der Radius R frei wählbar. Bitte bei der Bestellung den Radius angeben.

* With type L the radius R is freely selectable. Please specify the radius when ordering.

d1 g5	a max. ±0,01	b min. ±0,01	c max.	l2 +1		l1 +0,3			
				19	30	71	80	90	100
13	32	5	32	●	●	●	●	●	●
16	38	6,5	38	●	●	●	●	●	●
20	40	8	40	●	●	●	●	●	●
25	44	11	44	●	●	●	●	●	●
32	50	12,5	50	●	●		●	●	●
40	56	14	56	●	●		●	●	●

Ball lock punches, inverted

SCHNEIDELEMENTE / CUTTING ELEMENTS

SE 324 .

**Schwere Ausführung
mit federndem Auswerferstift**

**Heavy duty
with spring ejector**

**SE 324 O / 20 x 30 x
80 / a x b / 45°**

Mat.: HSS
Härte: 60 - 63 HRC

Mat.: HSS (e.g. M2)
Hardness: 60 - 63 HRC

Bei der Bestellung bitte die Position
der Kugellage angeben (Bild 1).

When ordering, please specify the
ball position (Fig. 1).

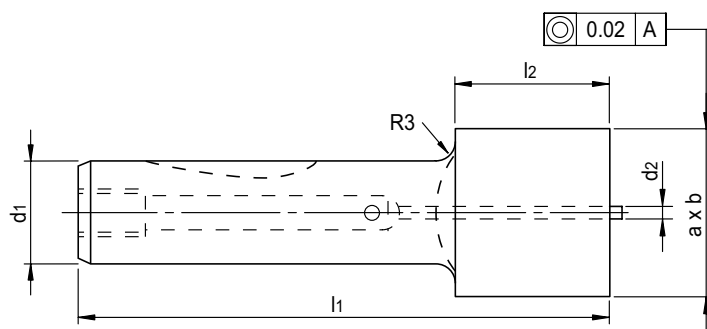
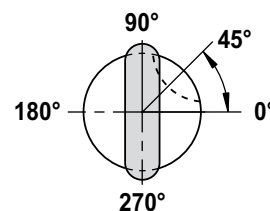
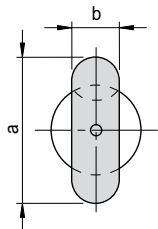


Bild 1/ Fig. 1

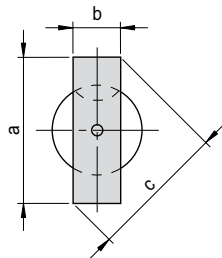


Typ / Type O



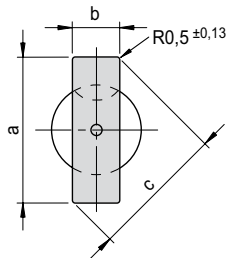
Langloch /
oblong

Typ / Type S



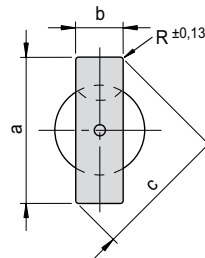
Quadrat, Rechteck /
square, rectangular

Typ / Type H



Profil mit Radius R0,5 /
Profile with radius R0,5

Typ / Type L



Profil mit frei wählbarem Radius /
Profile with freely selectable
radius

* Bei Typ L ist der
Radius R frei wählbar.
Bitte bei der Bestellung
den Radius angeben.

* With type L the radius R
is freely selectable.
Please specify the
radius when ordering.

d1 g5	d2	a max. ±0,01	b min. ±0,01	c max.	l2 +1		l1 +0,3			
					19	30	71	80	90	100
13	1,5	32	5	32	●	●	●	●	●	●
16	1,5	38	6,5	38	●	●	●	●	●	●
20	2,4	40	8	40	●	●	●	●	●	●
25	2,4	44	11	44	●	●	●	●	●	●
32	2,4	50	12,5	50	●	●		●	●	●
40	2,4	56	14	56	●	●		●	●	●

SE 340

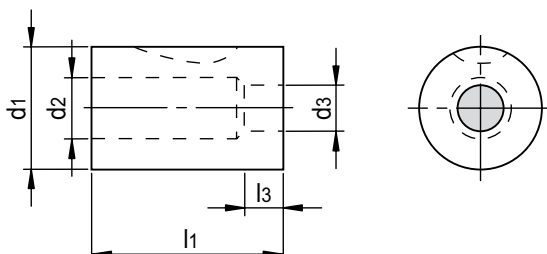
Leichte Ausführung

Mat.: HWS
Härte: 60 - 63 HRC

Light duty

Mat.: HWS (e.g. A2)
Hardness: 60 - 63 HRC

 **SE 340 / 20 / d3**



d1 g5	d3 +0,01 ≥ ≤	d2 max.	l1 +0,3	l3
13	1,5 - 5,0	6	32	4
16	3,2 - 7,0	8	32	5
20	4,0 - 11,0	12	32	5
25	8,0 - 15,0	16	32	6
32	11,0 - 19,0	20	32	6
38	16,5 - 26,0	27	32	8

SE 341 .

Leichte Ausführung

Mat.: HWS
Härte: 60 - 63 HRC

Bei der Bestellung bitte die Position der Kugellage angeben (Bild 1).

Light duty

Mat.: HWS (e.g. A2)
Hardness: 60 - 63 HRC

When ordering, please specify the ball position (Fig. 1).



**SE 341 S / 16 /
a x b / 45°**

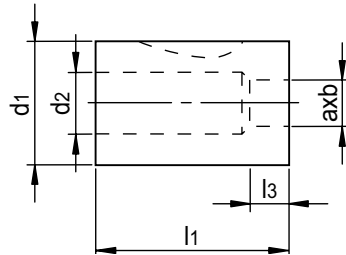
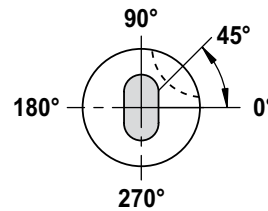
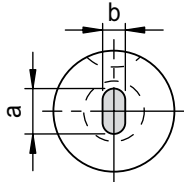


Bild 1/ Fig. 1

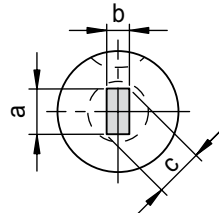


Typ / Type O



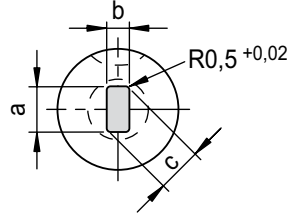
Langloch /
oblong

Typ / Type S



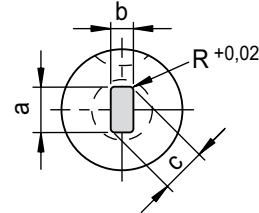
Quadrat, Rechteck /
square, rectangular

Typ / Type H



Profil mit Radius R0,5 /
Profile with radius R0,5

Typ / Type L



Profil mit frei wählbarem Radius /
Profile with freely selectable
radius

* Bei Typ L ist der Radius R frei wählbar. Bitte bei der Bestellung den Radius angeben.

* With type L the radius R is freely selectable. Please specify the radius when ordering.

d1 g5	a +0,02 ≥ ≤	b +0,02 ≥ ≤	d2 max.	c max.	l1 +0,3	l3
13	1,5 - 5,0	1,2 - 5,0	6	5,0	32	4
16	3,2 - 7,0	2,0 - 7,0	8	7,0	32	5
20	4,0 - 11,0	2,4 - 11,0	12	11,0	32	5
25	8,0 - 15,0	4,0 - 15,0	16	15,0	32	6
32	11,0 - 19,0	4,8 - 19,0	20	19,0	32	6
38	16,5 - 26,0	6,4 - 26,0	27	26,0	32	8

SE 390

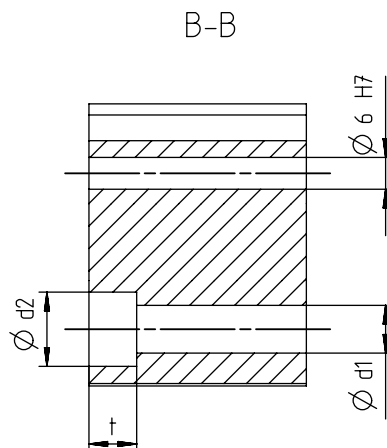
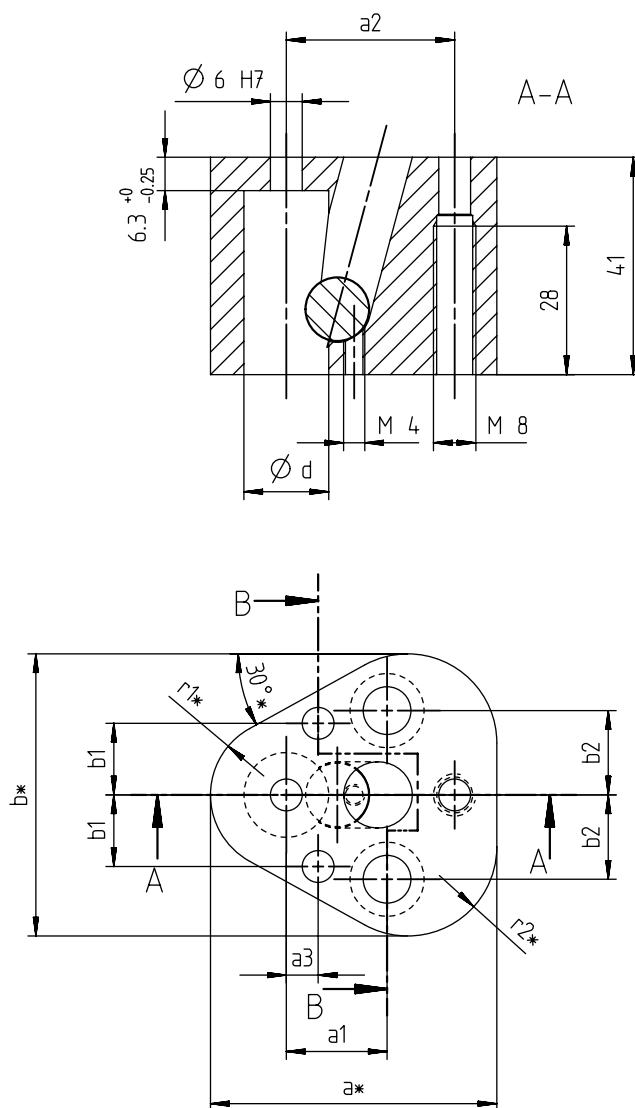
Schwere Ausführung

Lieferumfang:
Zylinderkopfschrauben, Zylinderstifte
und Gewindestift

Heavy duty

Included:
Socket head cap screws, dowel pins
and headless screw

SE 390 / 13



d H6	a*	b*	a3 ±0,01	a1 ±0,13	a2 ±0,01	r1*	r2*	b1 ±0,01	b2 ±0,13	d1	d2	t	Kugel-Ø Ball-Ø	Schraube Screw
10	44,5	43,7	7,5	19,0	26,93	9,5	12,0	9,0	11,1	9,0	15	9	10	M8
13	50,8	50,0	6,5	19,0	29,97	12,7	15,2	12,0	14,3	9,0	15	9	12	M8
16	54,0	53,2	6,0	19,0	31,75	14,3	16,8	13,5	15,9	9,0	15	9	12	M8
20	60,3	59,5	5,0	19,0	33,53	17,5	20,0	16,5	17,5	11,0	18	11	12	M10
25	69,9	69,1	7,0	23,8	40,64	22,2	24,7	22,0	19,8	13,5	20	13	12	M12
32	69,9	69,1	7,0	23,8	40,64	22,2	24,7	22,0	19,8	13,5	20	13	12	M12
40	77,4	76,6	10,0	27,0	43,99	26,0	28,5	26,0	24,0	13,5	20	13	12	M12

* Konturen können variieren. Größtmaße sind in der Tabelle angegeben.

* Contours may vary. Maximum dimensions are given in the table.

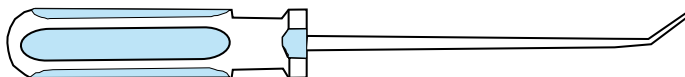
SE 360

abgewinkelte Ausführung

angular



SE 360



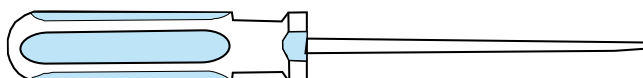
SE 361

gerade Ausführung

straight



SE 361



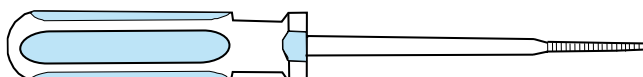
SE 362

Gewindeausführung

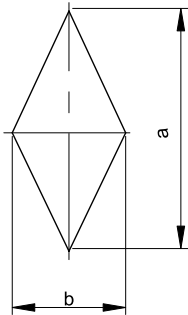
threaded



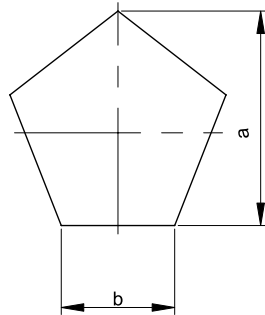
SE 362



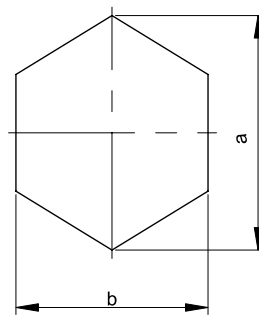
SP1



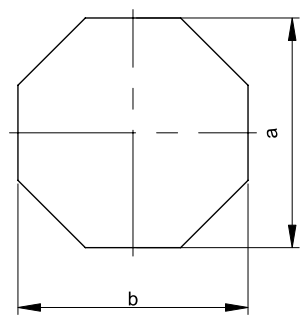
SP2



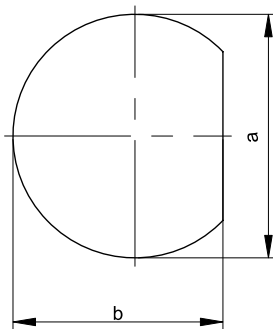
SP3



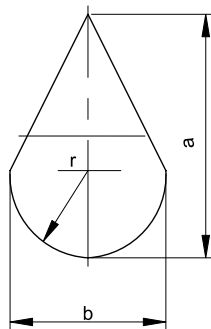
SP4



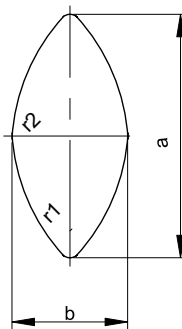
SP5



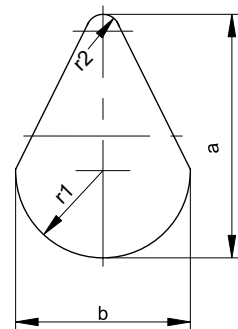
SP6



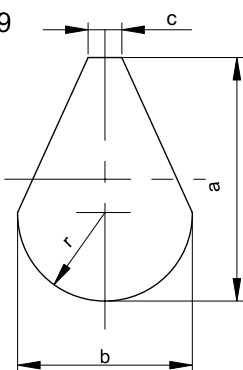
SP7



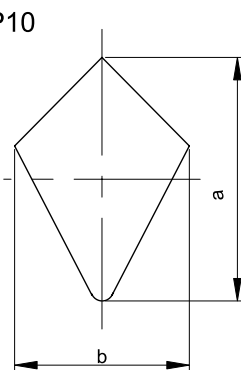
SP8



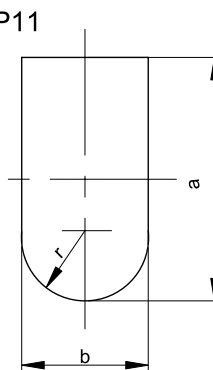
SP9



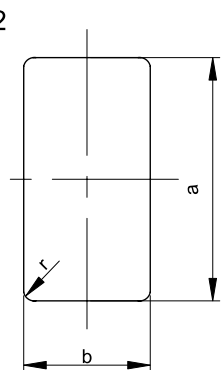
SP10



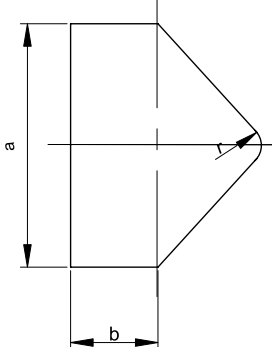
SP11



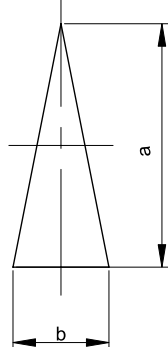
SP12



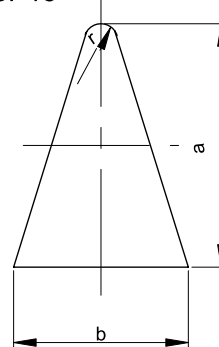
SP13



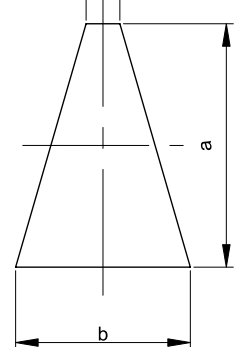
SP14



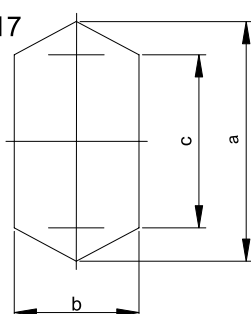
SP15



SP16



SP17



Datum / Date: _____

Schneidstempel / Punches

☐ **Anfrage / Inquiry**☐ Auftrag / Order

Schneidbuchse / Die button

☐ **Anfrage / Inquiry**☐ Auftrag / Order

**Firma /
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**Straße/Hausnummer /
Street/number:**

PLZ/Ort /

Postal code/city/country:

**Ansprechpartner /
Contact:**

**Telefon /
Phone:****Telefax /
Fax:**

**E-Mail /
Mail:**

**Anfrage-Nr. /
Inquiry-No.:**

**Auftrags-Nr. /
Order-No.:**

**Material /
Material:**

**Beschichtung /
Coating:**

Stückzahl /
Quantity:

Für Sonderausführungen erbitten wir eine Zeichnung oder CAD-Daten!
For special, custom made parts please provide drawing or CAD data!

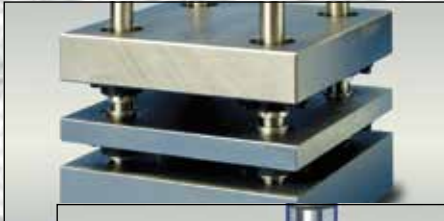
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This image shows a full page of blank graph paper. The background is a very light gray. Overlaid on this is a precise grid of thin, medium-blue lines. The grid consists of small, identical squares that cover the entire area of the page, leaving only narrow margins at the top and bottom edges. There are no markings, text, or other features on the grid itself.

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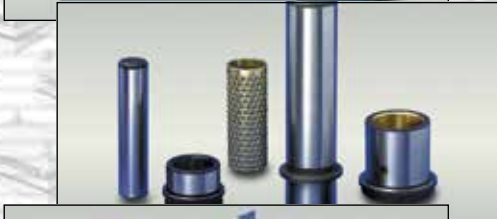


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