WESO

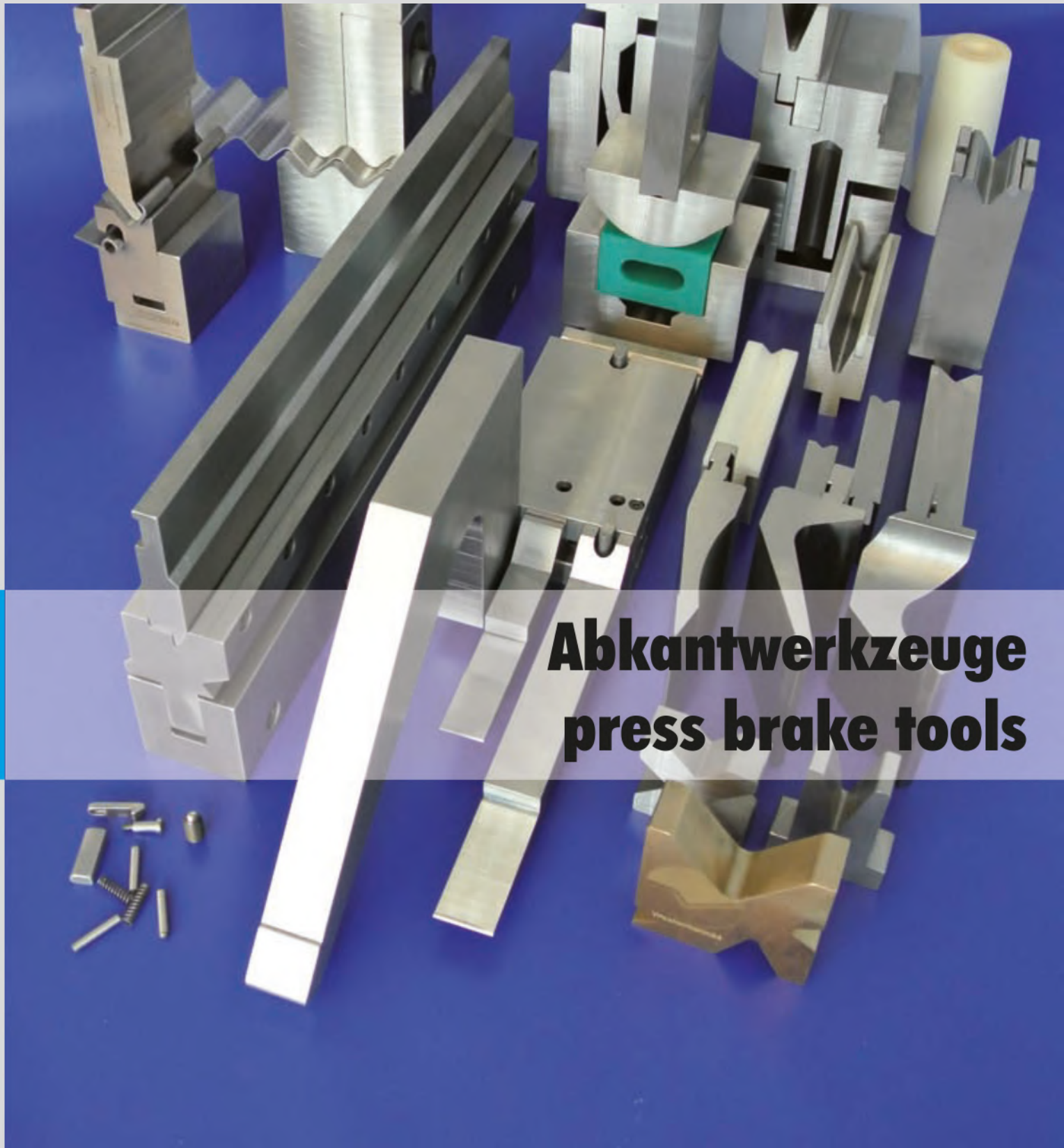
WERKZEUGBAU

Abkantwerkzeuge
Press Brake Tools

Westermann 24
Abkantwerkzeuge · Schleiftechnik

WESO WERKZEUGBAU

Westermann24 wird
WESO Werkzeugbau



Abkantwerkzeuge
press brake tools

Abkantwerkzeuge von Westermann - Tradition, die verbindet.

Westermann24 kann auf eine 100 jährige Tradition zurückblicken.
Als Hersteller von Abkantwerkzeugen sehen Sie in uns einen direkten Partner für Ihre Werkzeugversorgung.

Unser Mitarbeiterteam steht Ihnen mit Begeisterung, Qualifikation und persönlichem Einsatz zur Verfügung, um Ihre Erwartungen zu erfüllen. Denn im Zentrum unseres Denkens und Handelns stehen ganz klar Sie, lieber Kunde und die Mehrwerte, die wir Ihnen bieten können.

Das ständige Streben nach optimaler Werkzeugversorgung liegt uns sehr am Herzen, und wir sind dankbar, dass viele von Ihnen diesen Weg mit uns gemeinsam gehen.
Auch das verbindet uns.

Wir freuen uns auf den gemeinsamen Weg mit Ihnen in die Zukunft.

Press brake tools by Westermann - Tradition which connects

Westermann24 can look back on 100 years of tradition.
We see ourselves as developer and producer of press brake tools, as a premium partner of your tool supply.

Our interdisciplinary team of staff is ready to fulfil your expectations with qualification, enthusiasm and personal endeavor.
You and your genuine added values from us are in the center of our attention and action.

Constant striving for optimizing the supply of tools is very close to our hearts, and we are thankful because many of you walk this way together with us.
That connects too.

We are very glad to walk this way together in the future.

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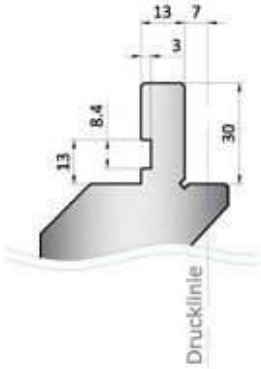
Oberwerkzeuge / Upper tools

direkt einsetzbar auf Abkantpressen von / directly able to work on bending presses of:
Amada, Atlantic, Adira, Bystronic-Beyeler Euro-B, CR-Electronic, Durmazlar, Ermaksan, Gasparini, Guifil, Haco, Imal, Mecos, Megobal, Promecam, SMD...

Orange Line

direkt einsetzbar auf Abkantpressen von:
Amada,Atlantic,Adira,Bystronic-Beyeler Euro-B,
CR-Electronic, Durmazlar, Ermaksan, Gasparini,
Guifil, Haco,Imal,Mecos, Megobal,Promecam,
SMD, u.v.m.



directly able to work on bending presses of:
Amada,Atlantic,Adira,Bystronic-Beyeler Euro-B,
CR-Electronic, Durmazlar, Ermaksan, Gasparini,
Guifil, Haco,Imal,Mecos, Megobal,Promecam,
SMD, and others

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Oberwerkzeuge:
OW 835mm sektioniert in : 10,15,20,40,50,200,300,100 Horn links, 100 Horn rechts

Unterwerkzeuge:
UW 835mm sektioniert in: 10,15,20,40,50,100,200,400

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden.
(siehe Seite 161)

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

design:
All radii are grinded and hardened

length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

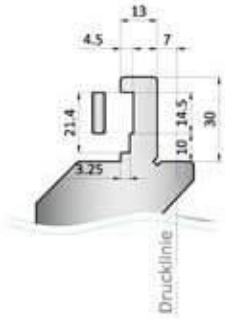
tool sets divided into sections:
Upper tool:
OW 835mm sectioned in : 10,15,20,40,50,200,300,100 horn left, 100 horn right

lower tool:
UW 835mm sectioned in: 10,15,20,40,50,100,200,400

loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

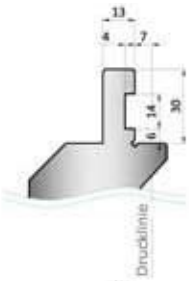
70.501 Modifikation : Bystronic-Beyeler Euro

70.501 modification : Bystronic-Beyeler Euro



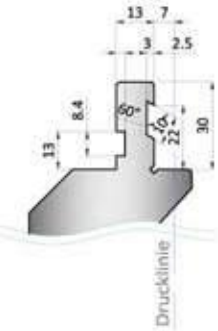
70.948 Modifikation : Nut mit Stahlleiste für sektionierte Werkzeuge

70.948 modification : Groove with steel strip for sectioned tools



70.503 Modifikation : Bystronic-Beyeler Euro , Safan

70.503 modification : Bystronic-Beyeler Euro , Safan



70.1050 Modifikation : Nut für pneumatische Klemmung „Clark"

70.1050 modification : Groove with pneumatic clamping „Clark"

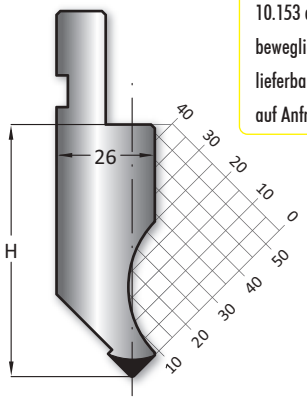
70.600 Modifikation : hydraulische Klemmung Gasparini

70.600 modification : hydraulic clamping Gasparini

415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
11.100	90°	0.80	66.60	100	I
10.152	90°	0.25	66.60	100	I
11.101	88°	3.00	65.45	100	I
11.145	88°	0.80	66.50	100	I
10.153	88°	0.25	66.50	100	I
11.201	85°	3.00	65.45	100	I
11.200	85°	0.80	66.50	100	I
11.853	85°	0.25	66.50	100	I

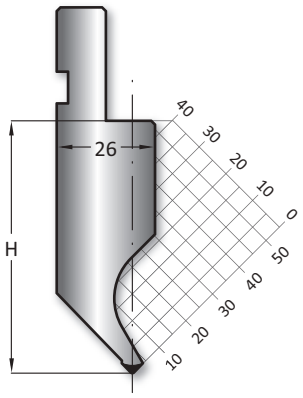
11.100, 10.152, 11.145 und 10.153 ab Lager mit beweglichen Hörnern lieferbar. Andere Artikel auf Anfrage. (S. 166)



90°
88°
85°

415 mm
835 mm
835 mm

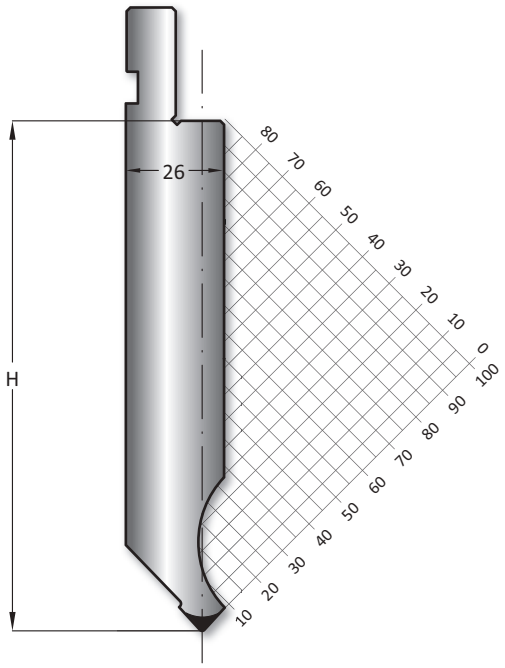
	α	R	H	T/mt	Mt
10.175	90°	0.60	66.75	35	II
10.173	90°	0.25	66.70	35	II
10.176	88°	0.60	66.74	35	II
10.174	88°	0.25	66.70	35	II
10.170	85°	0.60	66.74	35	II
10.857	85°	0.25	67.00	35	II



90°
88°
85°

415 mm
835 mm
835 mm

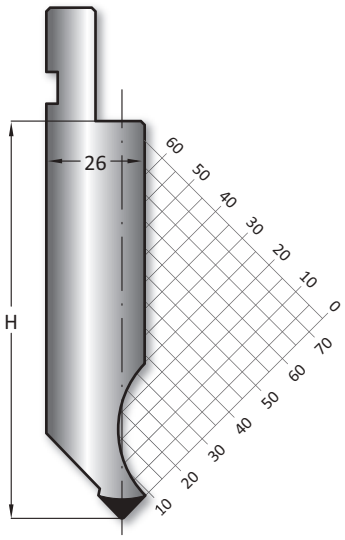
	α	R	H	T/mt	Mt
11.870	88°	0.80	135.00	100	I
11.232	85°	0.80	135.00	100	I



88°
85°

415 mm
835 mm
835 mm

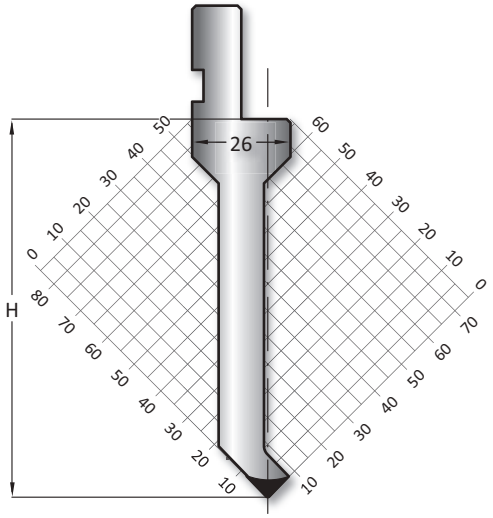
	α	R	H	T/mt	Mt
11.228	88°	0.80	105.00	100	I
11.231	85°	3.00	105.00	100	I
11.230	85°	0.80	105.00	100	I



88°
85°

415 mm
835 mm
835 mm

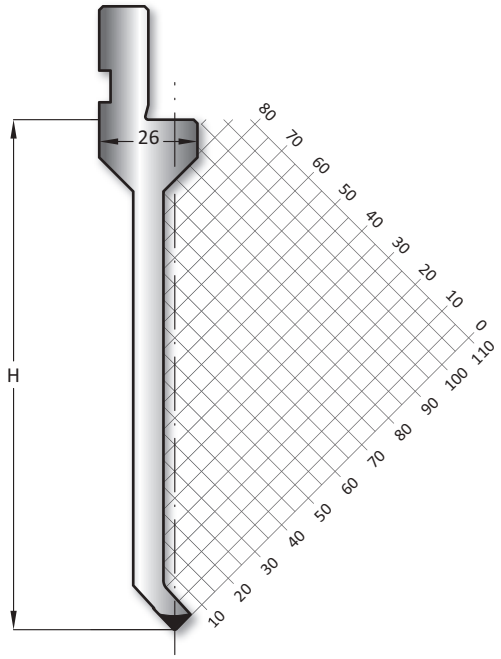
	α	R	H	T/mt	Mt
10.261	90°	0.60	100.00	50	II
10.263	90°	0.25	100.00	50	II
10.262	88°	0.60	100.00	50	II
10.264	88°	0.25	100.00	50	II
10.626	85°	0.60	100.00	50	II
10.861	85°	0.25	100.00	50	II



90°
88°
85°

415 mm
835 mm
835 mm

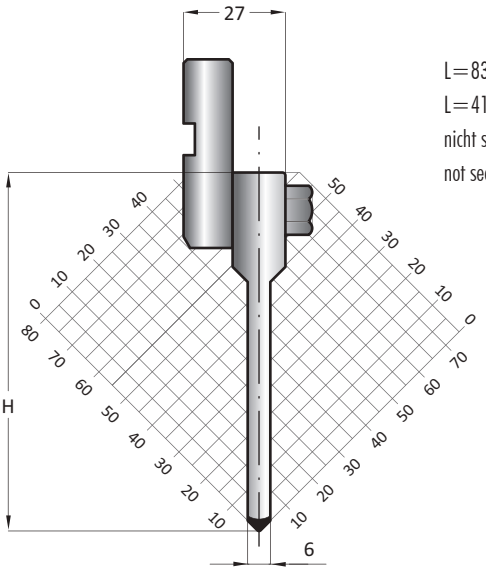
	α	R	H	T/mt	Mt
11.858	88°	0.60	135.00	40	III
11.855	85°	0.60	135.00	40	III



88°
85°

415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
10.259	90°	0.60	95.00	50	II
10.256	90°	0.25	95.00	50	II
10.260	88°	0.60	95.00	50	II
10.257	88°	0.25	95.00	50	II



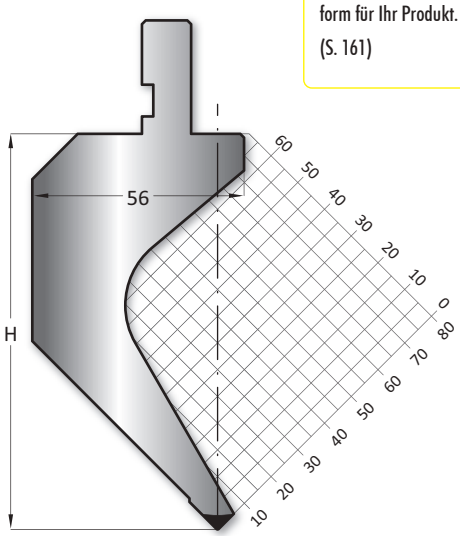
L=835
L=415
nicht sektionierbar
not sectionable

90°
88°

415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
10.503	90°	0.20	104.70	50	II
10.504	88°	0.80	104.50	50	II
11.650	85°	0.80	104.50	50	II
11.868	85°	0.25	104.70	50	II

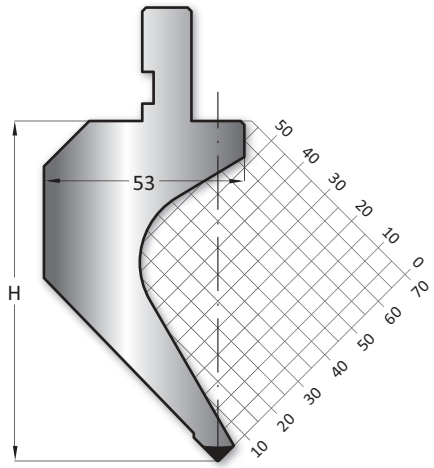
Westermann24 entwickelt für Sie die richtige Werkzeugform für Ihr Produkt. (S. 161)



90°
88°
85°

415 mm
835 mm
835 mm

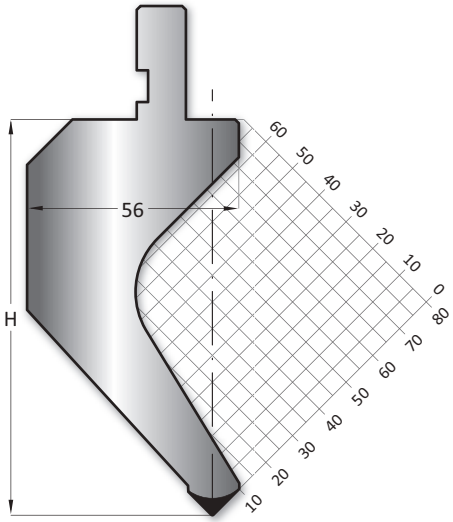
	α	R	H	T/mt	Mt
10.501	90°	0.20	90.00	50	II
10.502	88°	0.80	89.70	50	II
11.865	85°	0.80	89.70	50	II



90°
88°
85°

415 mm
835 mm
835 mm

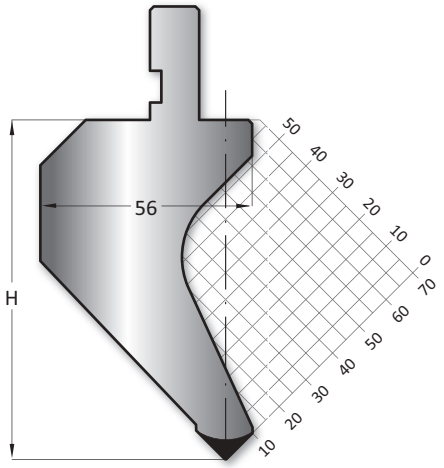
	α	R	H	T/mt	Mt
11.107	90°	0.80	104.50	50	I
10.156	90°	0.25	104.50	50	I
11.108	88°	3.00	103.50	50	I
11.147	88°	0.80	104.50	50	I
10.157	88°	0.25	104.50	50	I
11.867	85°	0.25	104.50	50	I
11.866	85°	3.00	103.50	50	I
11.151	85°	0.80	104.50	50	I



90°
88°
85°

415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
11.105	90°	0.80	89.60	60	I
10.154	90°	0.25	89.60	60	I
11.106	88°	3.00	88.50	60	I
11.146	88°	0.80	89.58	60	I
10.155	88°	0.25	89.60	60	I
11.660	85°	0.80	89.58	60	I
11.863	85°	3.00	88.50	60	I
11.864	85°	0.25	89.70	60	I



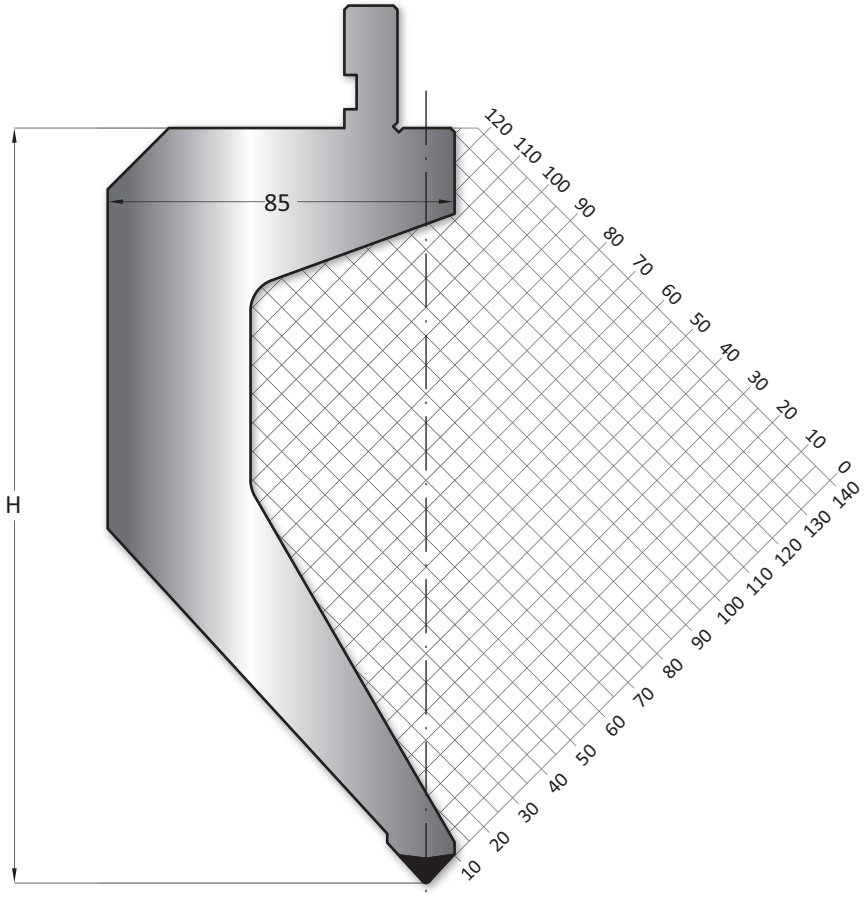
90°
88°
85°

Westermann 24 liefert Ihnen Oberwerkzeuge mit beweglichen Hörnern.
Entweder fertig ab Lager, oder individuell für Sie gefertigt.
(S. 166)

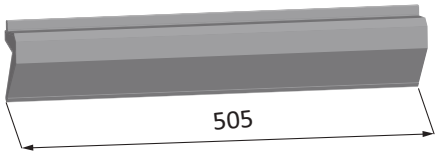
	α	R	H	T/mt	Mt
11.840	85°	1.00	185.00	60	II

505 mm

500 mm

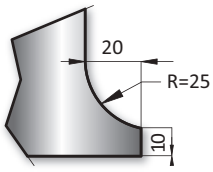


Standardlänge - Standard Length

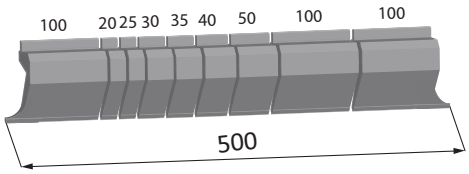


505 mm

Horn Standard Teilung - Horns Scheme Standard Sectioning



Geteilte Länge - Sectioned Length



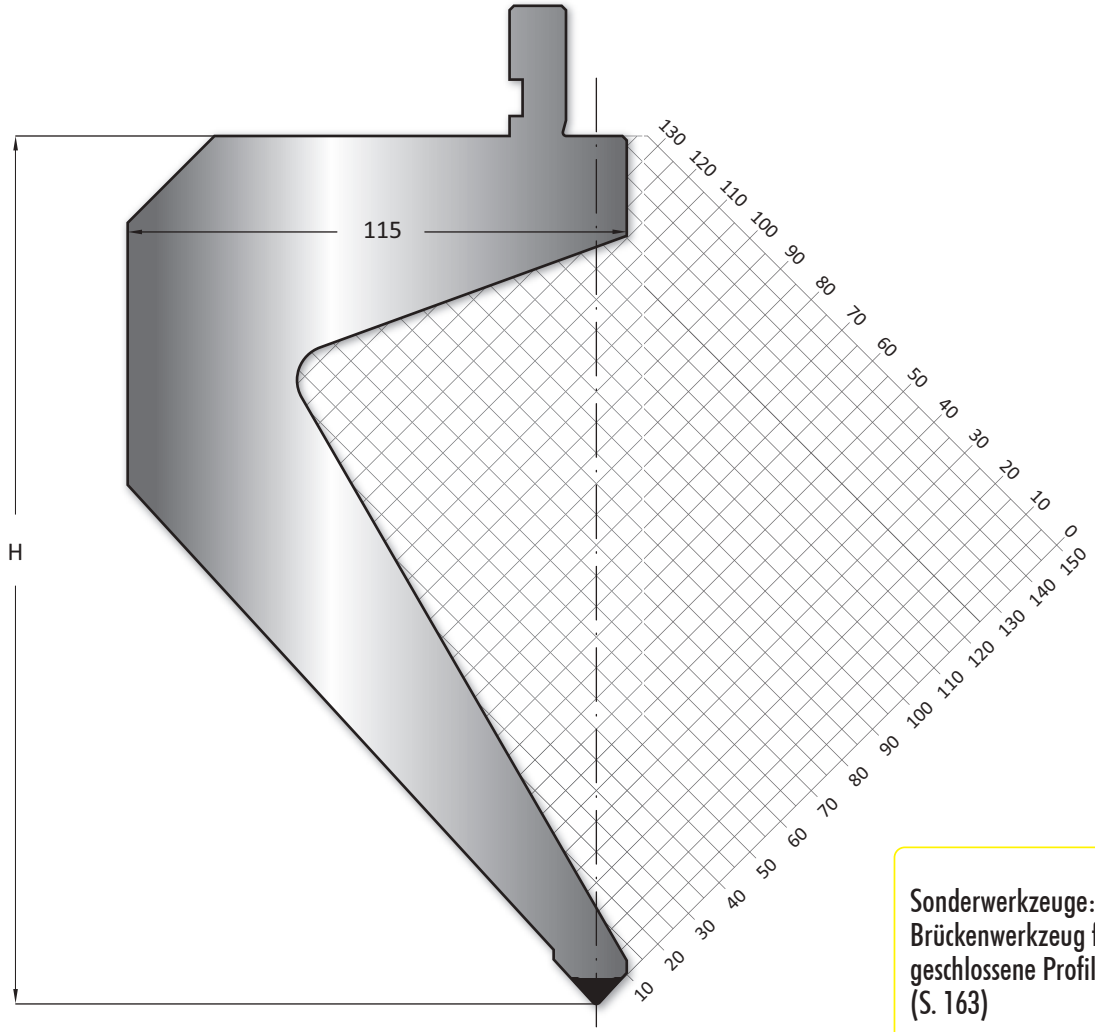
500 mm

85°

	α	R	H	T/mt	Mt
11.800	85°	1.00	200.00	70	II

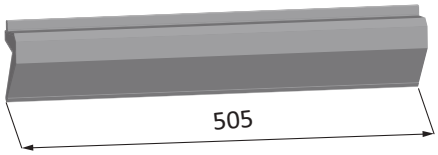
505 mm

500 mm



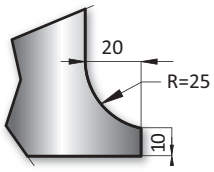
Sonderwerkzeuge:
Brückenwerkzeug für geschlossene Profile
(S. 163)

Standardlänge - Standard Length

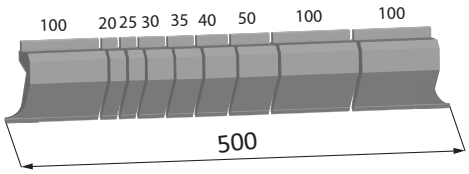


505 mm

Horn Standard Teilung - Horns Scheme Standard Sectioning



Geteilte Länge - Sectioned Length

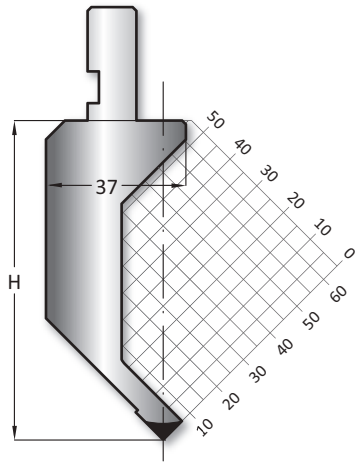


500 mm

85°

415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
10.150	90°	0.60	84.13	20	III
10.512	88°	0.60	84.13	20	III

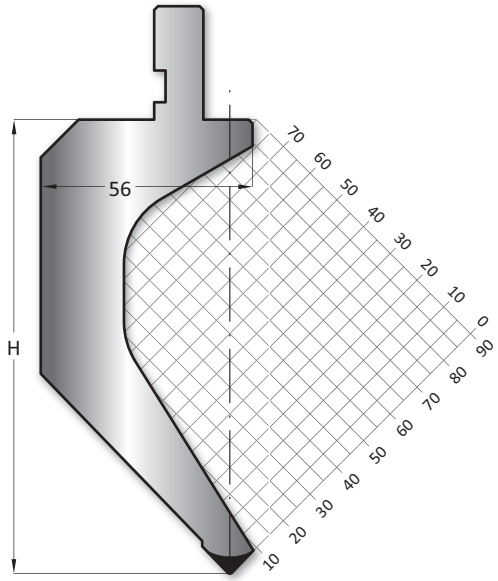


90°

88°

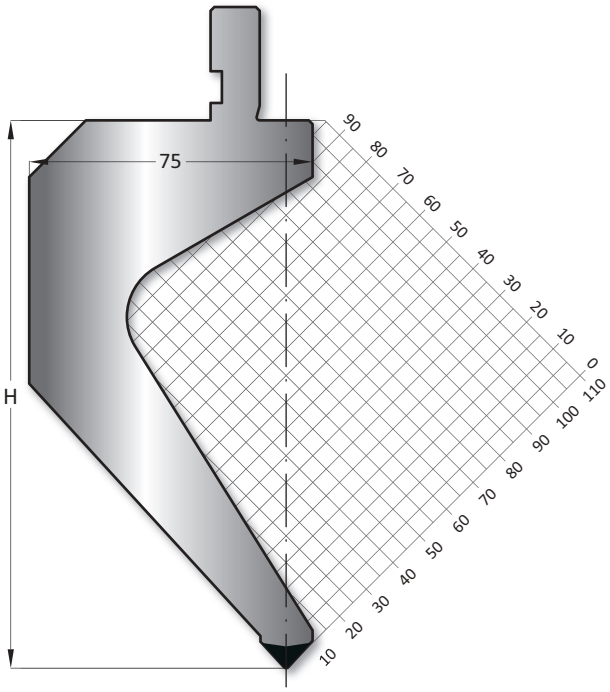
415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
10.505	88°	0.80	120.00	50	III
11.835	85°	0.80	120.00	50	III



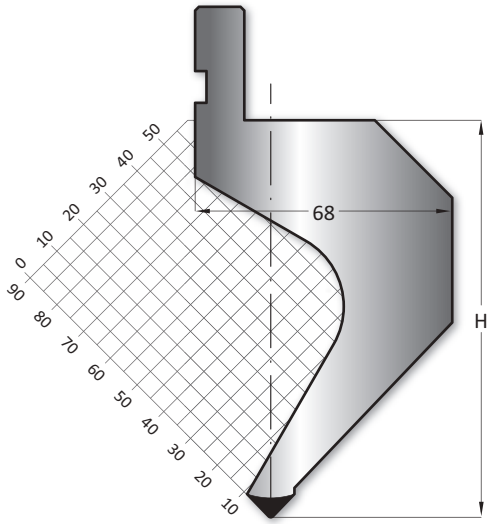
415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
11.670	85°	0.80	145.00	60	III



415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
11.233	88°	0.80	105.00	45	I
11.869	85°	0.80	105.00	45	I

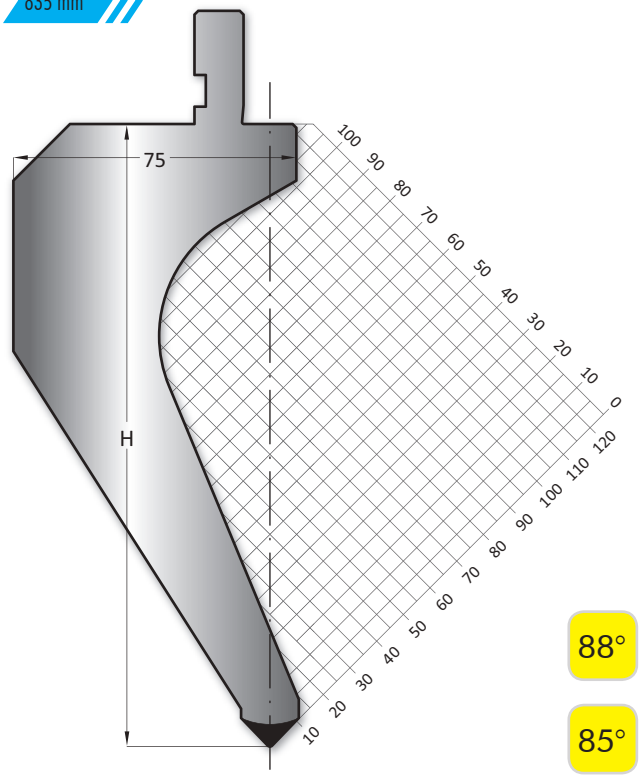


88°

85°

415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
11.149	88°	0.80	165.00	60	I
11.849	85°	0.80	165.00	60	I

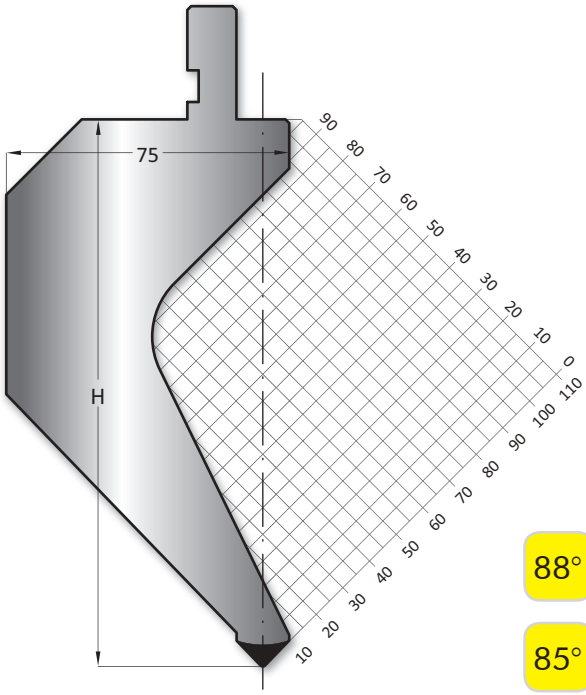


88°

85°

415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
11.148	88°	0.80	145.00	70	I
11.848	85°	0.80	145.00	70	I

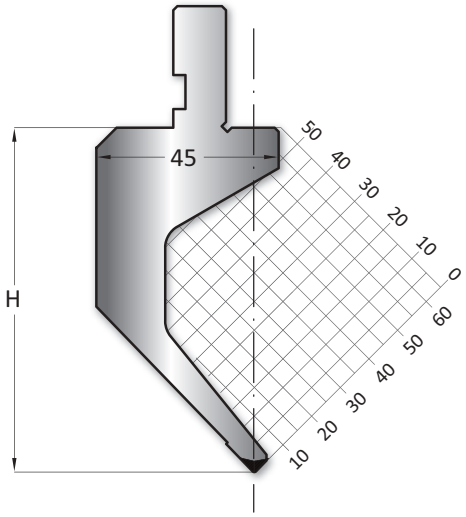


88°

85°

415 mm
835 mm
835 mm

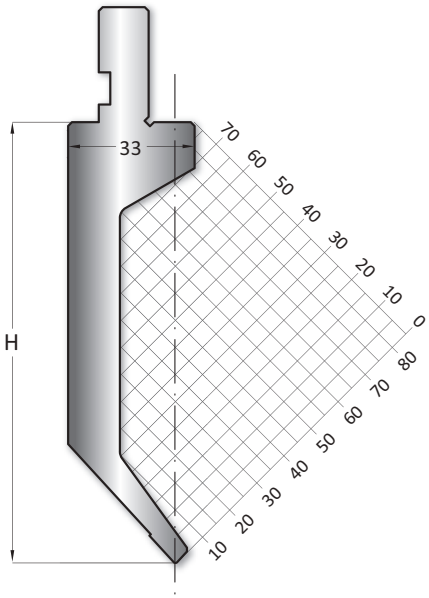
	α	R	H	T/mt	Mt
11.830	88°	0.60	85.00	15	III



88°

415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
11.820	85°	0.60	115.00	20	III



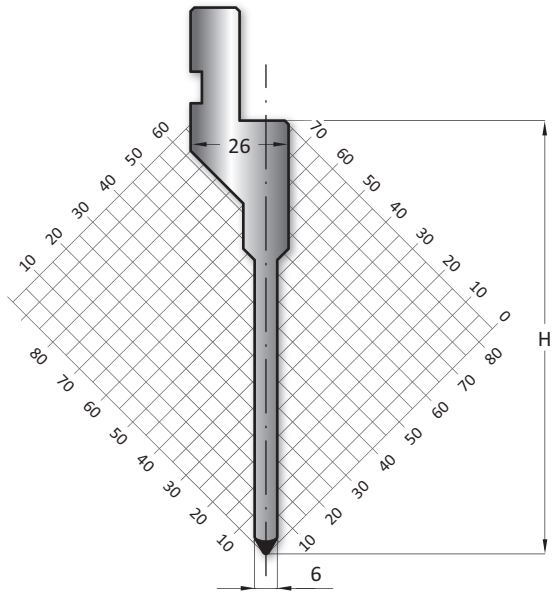
85°

415 mm

835 mm

835 mm

	α	R	H	T/mt	Mt
10.520	60°	0.80	115.00	50	II



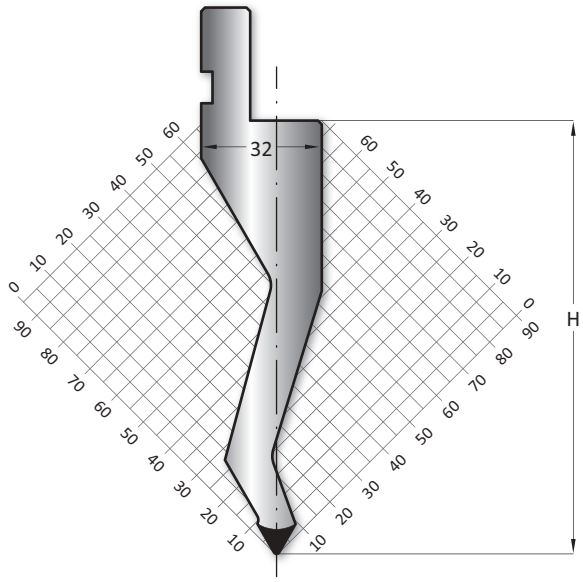
60°

415 mm

835 mm

835 mm

	α	R	H	T/mt	Mt
10.510	60°	0.80	115.00	60	II



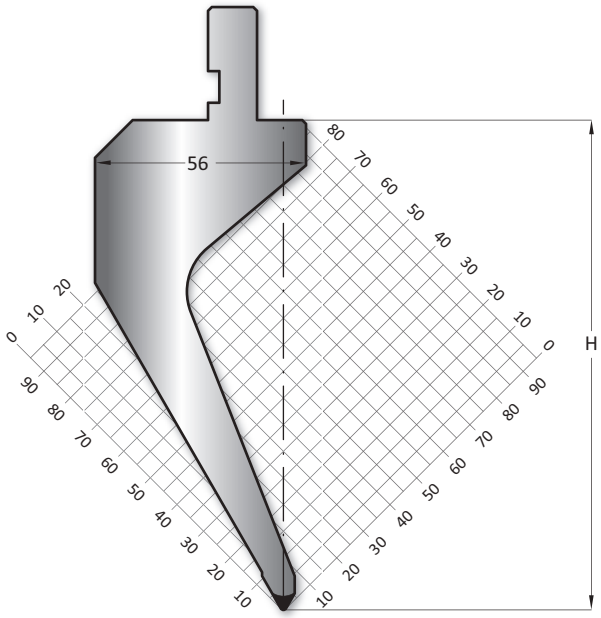
60°

415 mm

835 mm

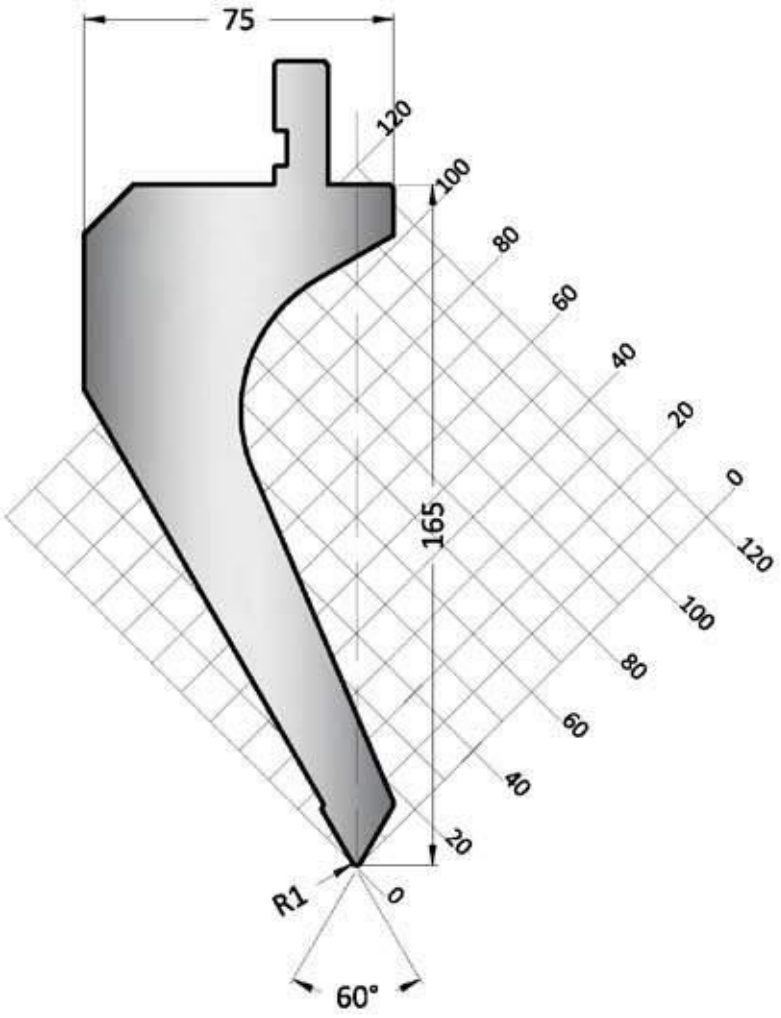
835 mm

	α	R	H	T/mt	Mt
11.506	60°	0.80	130.00	40	II



60°

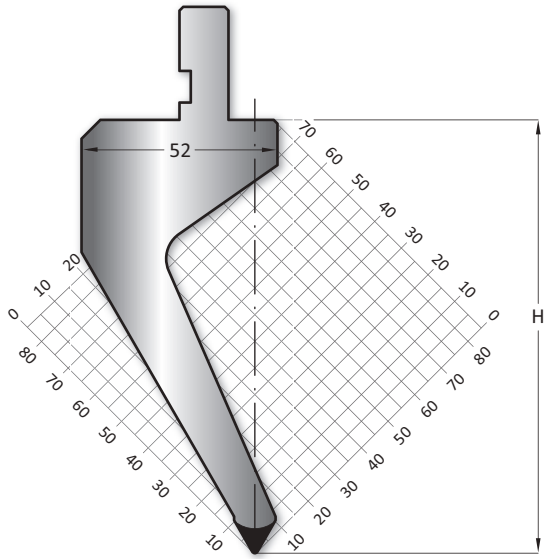
	α	R	H
1.01.279	60°	1.00	165.00



60°

415 mm
835 mm
835 mm

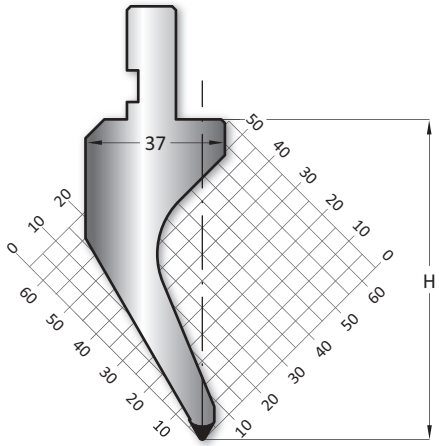
	α	R	H	T/mt	Mt
10.500	60°	0.80	115.00	40	II



60°

415 mm
835 mm
835 mm

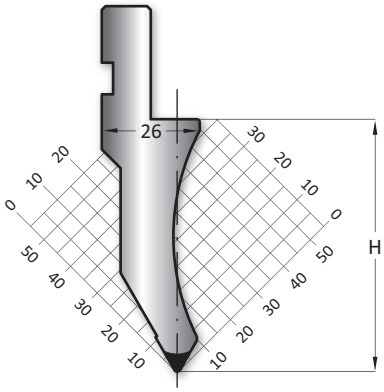
	α	R	H	T/mt	Mt
10.516	60°	0.80	85.00	40	II



60°

415 mm
835 mm
835 mm

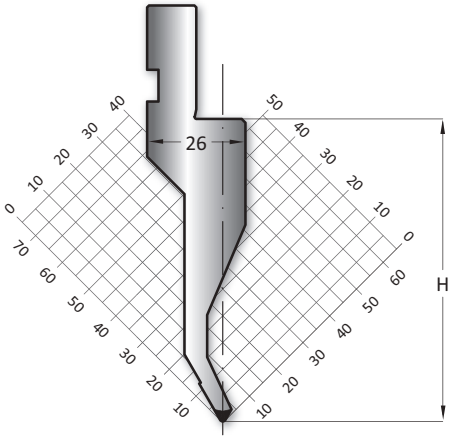
	α	R	H	T/mt	Mt
10.143	60°	2.00	65.80	60	I
10.142	60°	0.80	67.00	60	I



60°

415 mm
835 mm
835 mm

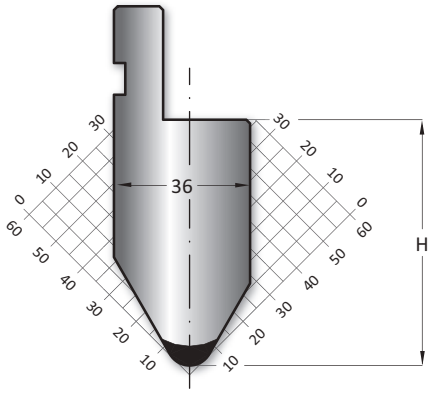
	α	R	H	T/mt	Mt
10.517	60°	0.80	80.00	25	III



60°

415 mm
835 mm
835 mm

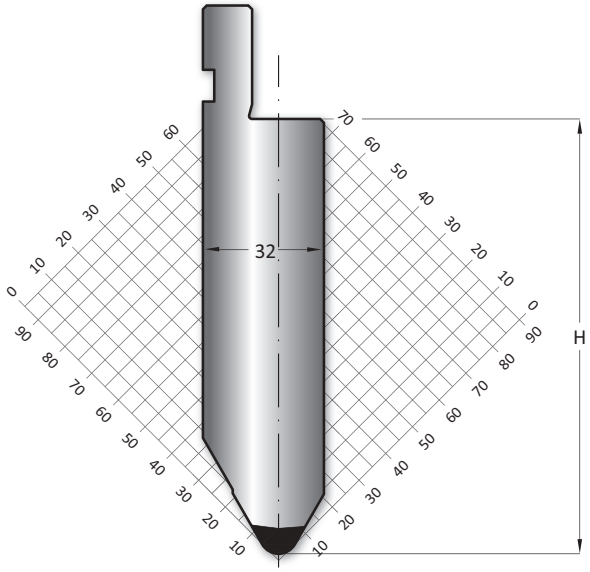
	α	R	H	T/mt	Mt
10.136	60°	6.00	65.00	100	I



60°

415 mm
835 mm
835 mm

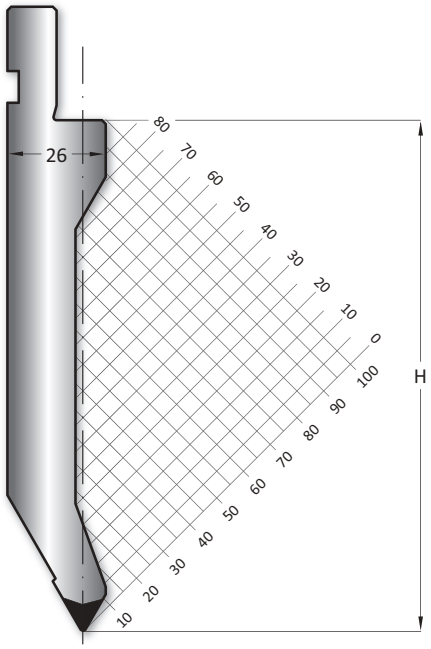
	α	R	H	T/mt	Mt
10.710	60°	5.00	115.00	100	I
10.720	60°	10.00	115.00	100	I



60°

415 mm
835 mm
835 mm

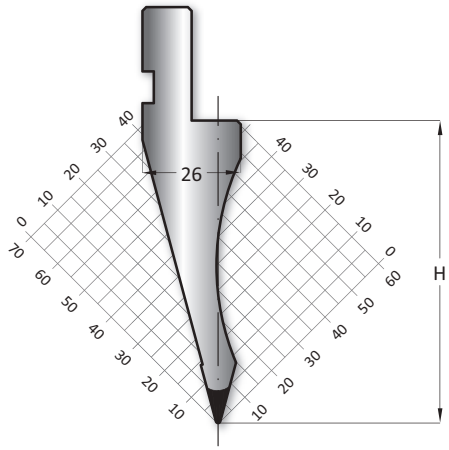
	α	R	H	T/mt	Mt
11.750	60°	0.80	135.00	60	I



60°

415 mm
835 mm
835 mm

	α	R	H	T/mt	Mt
10.514	30°	0.60	80.00	50	III



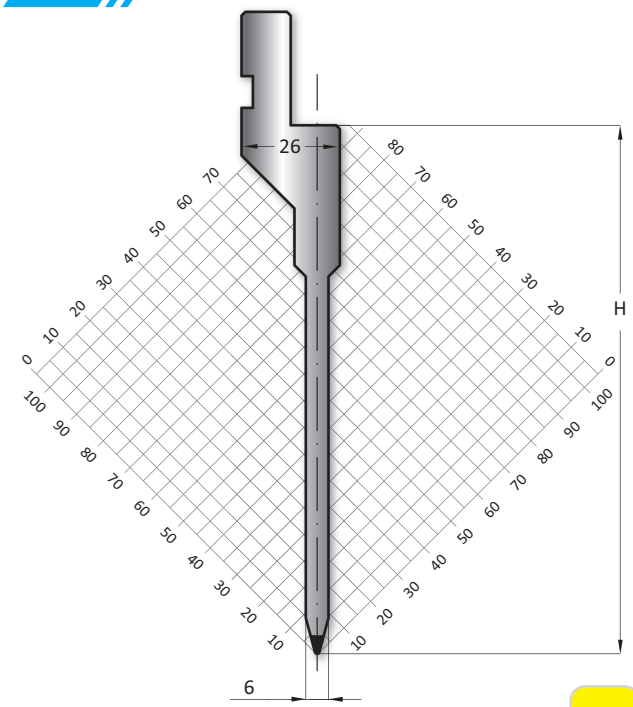
30°

415 mm

835 mm

835 mm

	α	R	H	T/mt	Mt
10.515	30°	0.60	140.00	50	III



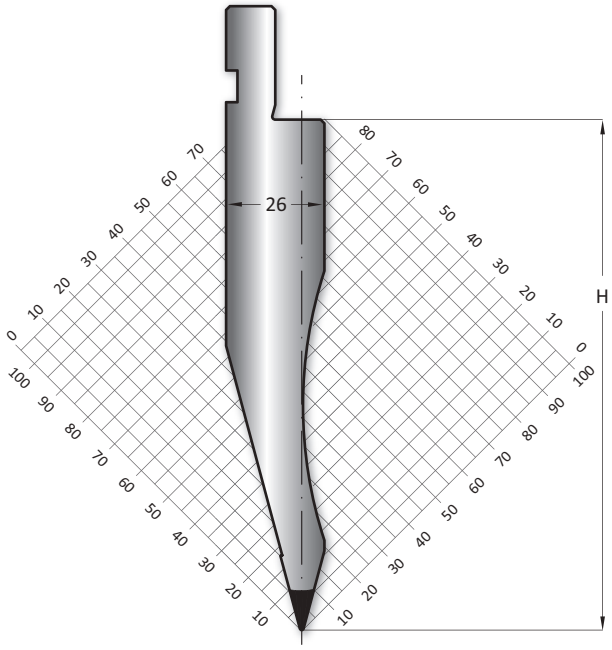
30°

415 mm

835 mm

835 mm

	α	R	H	T/mt	Mt
11.780	30°	0.50	135.00	80	I



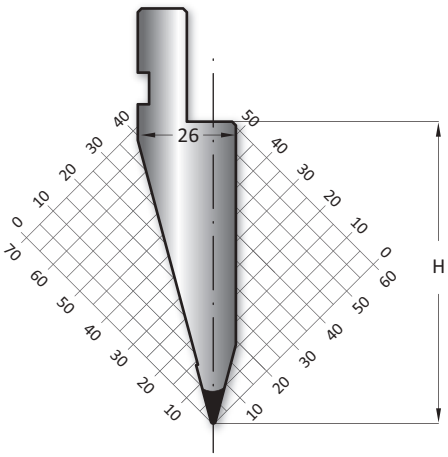
30°

415 mm

835 mm

835 mm

	α	R	H	T/mt	Mt
11.158	30°	0.60	80.00	100	I
10.511	30°	3.00	80.00	100	I



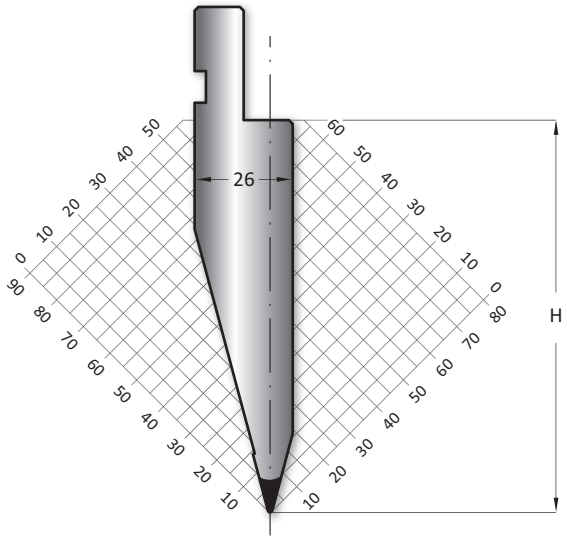
30°

415 mm

835 mm

835 mm

	α	R	H	T/mt	Mt
11.258	30°	0.60	104.00	100	I
11.530	30°	5.00	104.00	100	I
11.528	30°	3.00	104.00	100	I



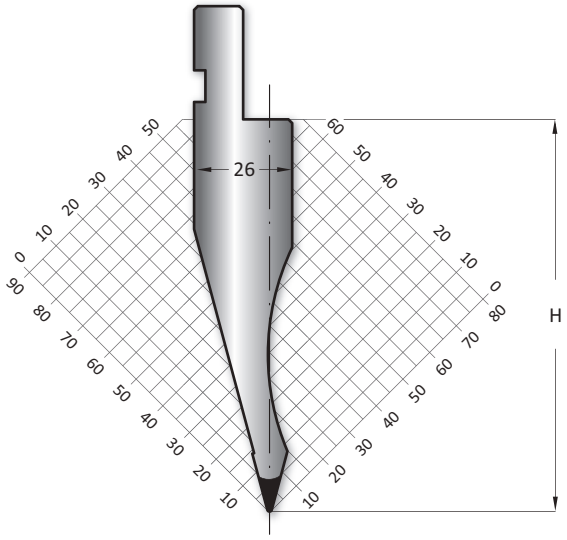
30°

415 mm

835 mm

835 mm

	α	R	H	T/mt	Mt
11.514	30°	0.60	104.00	50	III



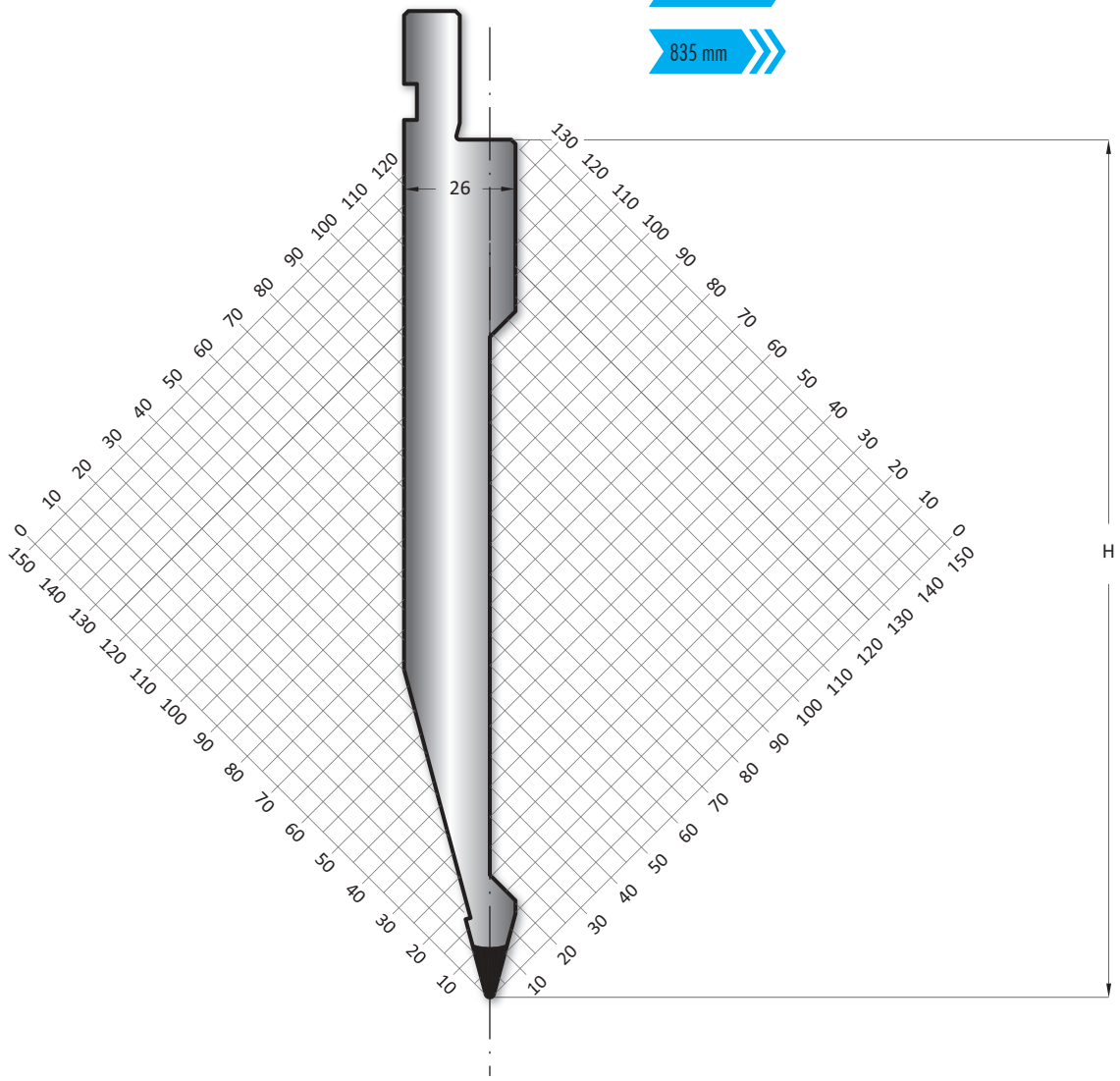
30°

415 mm

835 mm

835 mm

	α	R	H	T/mt	Mt
11.810	30°	1.00	200.00	50	II



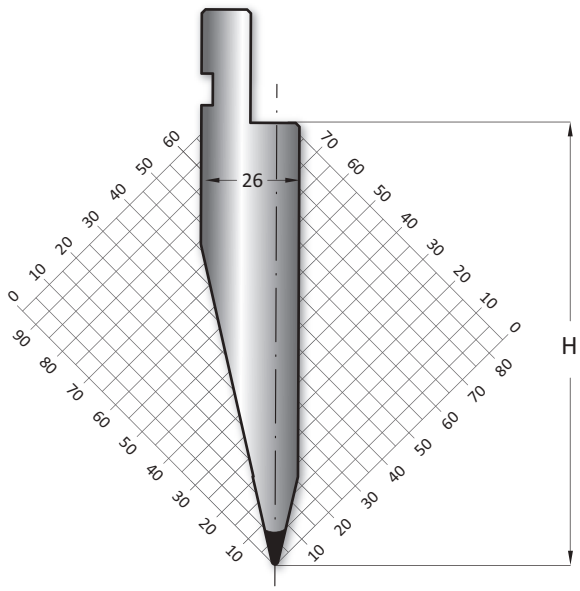
30°

415 mm

835 mm

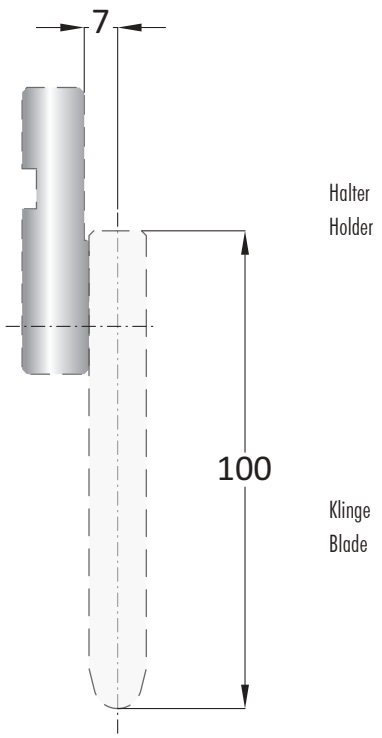
835 mm

	α	R	H	T/mt	Mt
11.540	26°	0.80	117.00	100	I



26°

Montagebeispiel - Assembly Scheme

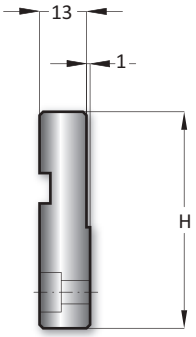


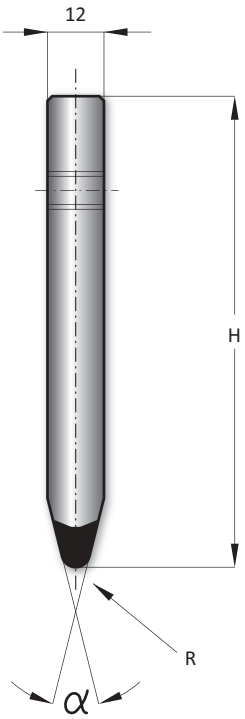
	H	Mt
10.400	60.00	I

100 mm

500 mm

550 mm





100 mm

500 mm

550 mm

	α	R	H	T/mt	Mt
15.776	86°	1.00	100	100	III
15.774	84°	1.00	100	100	III
15.769	28°	6.00	100	100	III
15.768	28°	5.00	100	100	III
15.767	28°	4.00	100	100	III
15.766	28°	3.00	100	100	III
15.765	28°	2.00	100	100	III
15.763	28°	1.00	100	100	III
15.761	28°	0.50	100	100	III

86°

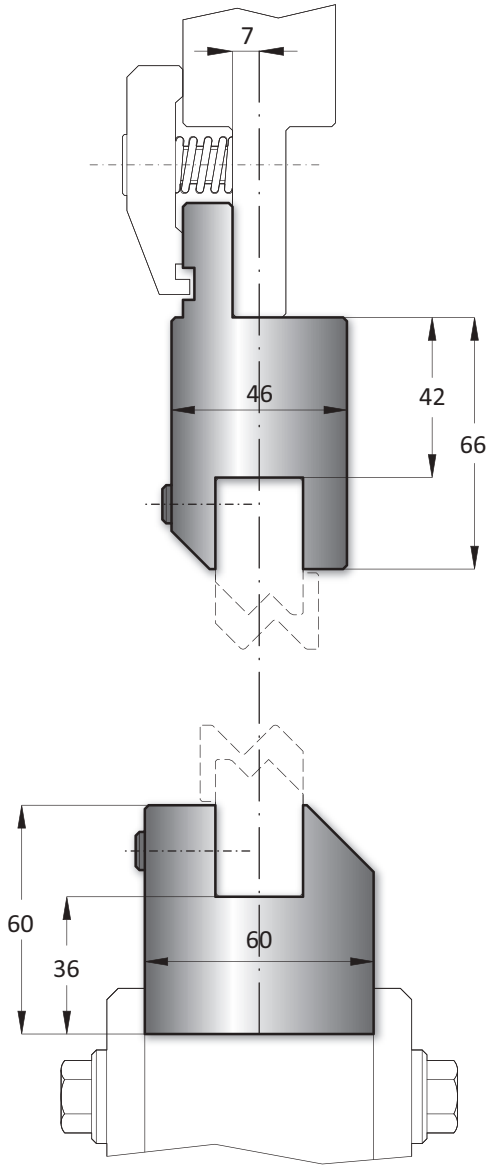
84°

28°

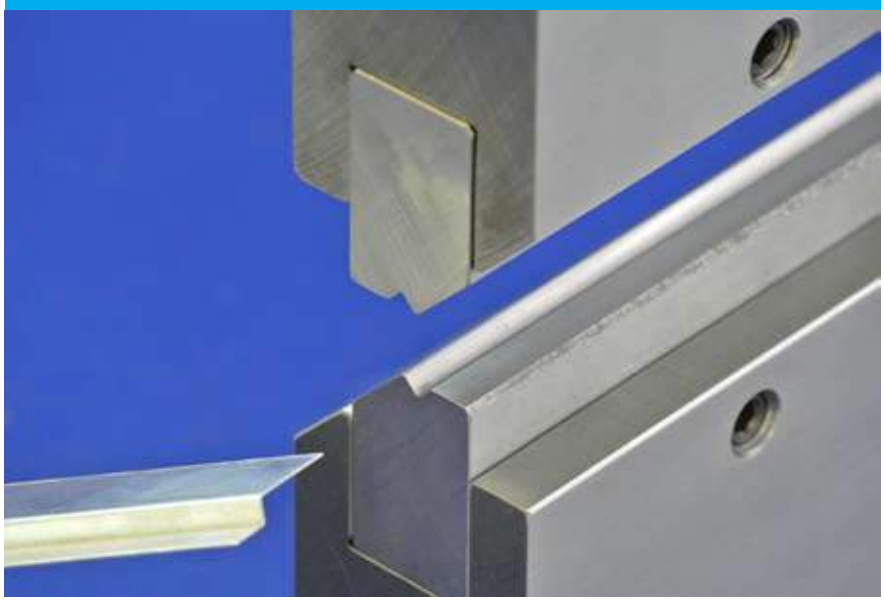
	T/mt	Mt
40.419	100	I

415 mm

835 mm



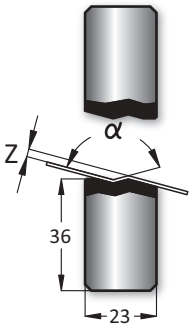
Montagebeispiel - Assembly Scheme



415 mm

835 mm

	Z	α	T/mt	Mt
40.510	1.00	160°	100	I
40.515	1.50	160°	100	I
40.520	2.00	150°	100	I
40.525	2.50	140°	100	I



160°

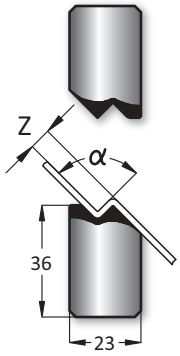
150°

140°

415 mm

835 mm

	Z	α	T/mt	Mt
40.511	1.00	90°	100	I
40.516	1.50	90°	100	I
40.521	2.00	90°	100	I
40.526	2.50	90°	100	I
40.530	3.00	90°	100	I
40.535	3.50	90°	100	I
40.540	4.00	90°	100	I
40.545	4.50	90°	100	I
40.550	5.00	90°	100	I
40.555	5.50	90°	100	I
40.560	6.00	90°	100	I
40.565	6.50	90°	100	I
40.570	7.00	90°	100	I
40.575	7.50	90°	100	I
40.580	8.00	90°	100	I

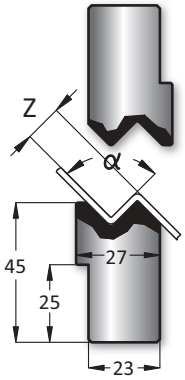


90°

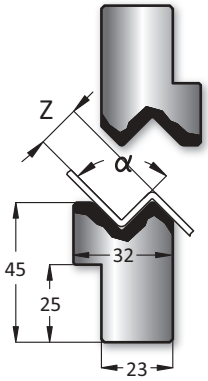
415 mm

835 mm

	Z	α	T/mt	Mt
40.590	9.00	90°	100	I
40.610	10.00	90°	100	I
40.611	11.00	90°	100	I
40.612	12.00	90°	100	I



90°

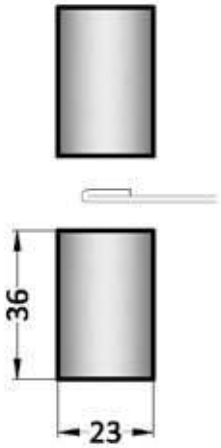


	Z	α	T/mt	Mt
40.613	13.00	90°	100	I
40.614	14.00	90°	100	I
40.615	15.00	90°	100	I

415 mm

835 mm

90°



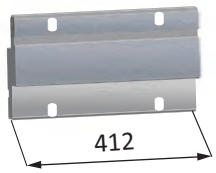
	Z	α	T/mt	Mt
40.500				I

415 mm

835 mm

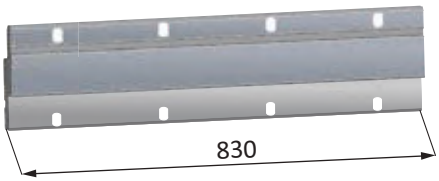
90°

Halbe Länge - Half Length



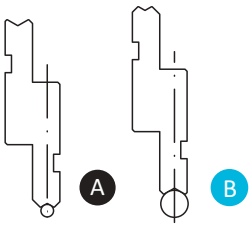
412 mm

Standardlänge - Standard Length



830 mm

Montagebeispiel - Assembly Scheme



R 3.0 Min
R 4.5 Max

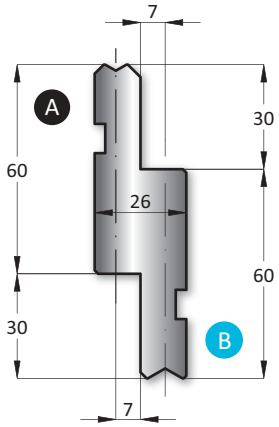
R 5.0 Min
R 6.5 Max

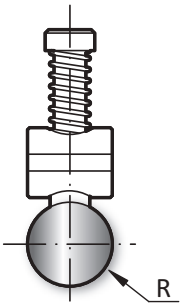
Einsetzbar in kleiner V-Kerbe (A) oder großer V-Kerbe (B), je nach Radius
The inserts are mounted on A or B side depending on the type of radius

	T/mt	Mt
10.180	80	I

412 mm

830 mm





	R	V-Kerbe
10.181	3.00	A
10.182	3.50	A
10.183	4.00	A
10.184	4.50	A
10.185	5.00	B
10.186	5.50	B
10.187	6.00	B
10.188	6.50	B

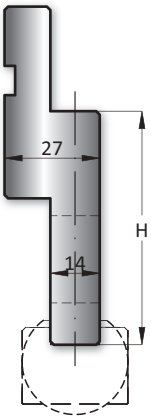
415 mm

835 mm

	H	T/mt	Mt
10.115	67.00	80	I

412 mm

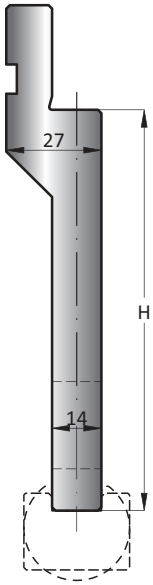
830 mm



	H	T/mt	Mt
10.116	115.00	80	I

412 mm

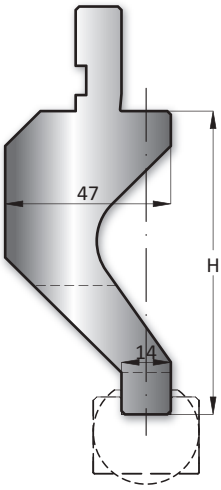
830 mm



	H	T/mt	Mt
10.190	87.00	50	I

412 mm

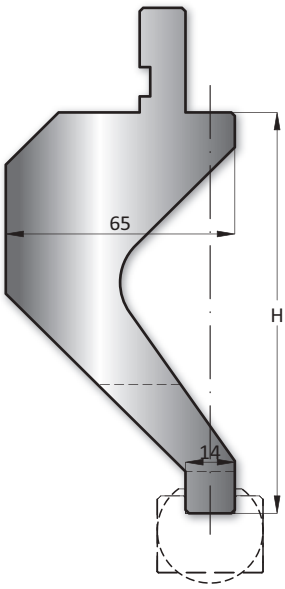
830 mm



	H	T/mt	Mt
10.191	115.00	50	I

412 mm

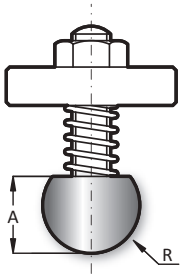
830 mm



415 mm

835 mm

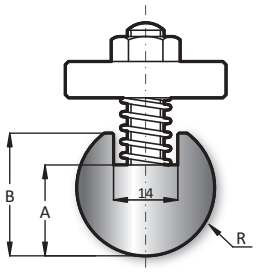
	R	A
10.300	7.00	11.50
10.301	7.50	11.50
10.302	8.00	13.00
10.303	9.00	16.00
10.304	10.00	16.00
10.305	11.00	16.00
10.306	11.50	19.00
10.307	12.00	20.00



415 mm

835 mm

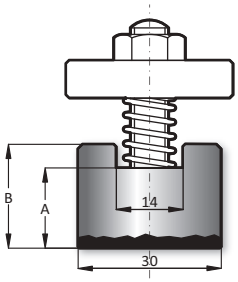
	R	A	B
10.308	12.50	16.00	21.00
10.309	13.00	17.00	23.00
10.310	14.00	19.00	25.00
10.311	15.00	20.00	27.00
10.312	16.00	21.00	28.00
10.313	17.00	21.50	31.50
10.314	17.50	22.00	32.00
10.315	19.00	25.00	32.00
10.316	20.00	24.00	34.00
10.317	22.50	25.00	33.00
10.318	25.00	29.00	39.00
10.319	27.50	34.00	44.00
10.320	30.00	34.00	44.00
10.321	35.00	45.00	55.00
10.322	40.00	45.00	55.00
10.323	45.00	50.00	60.00
10.324	50.00	54.00	64.00



415 mm

835 mm

	A	B
10.325	17.00	22.00

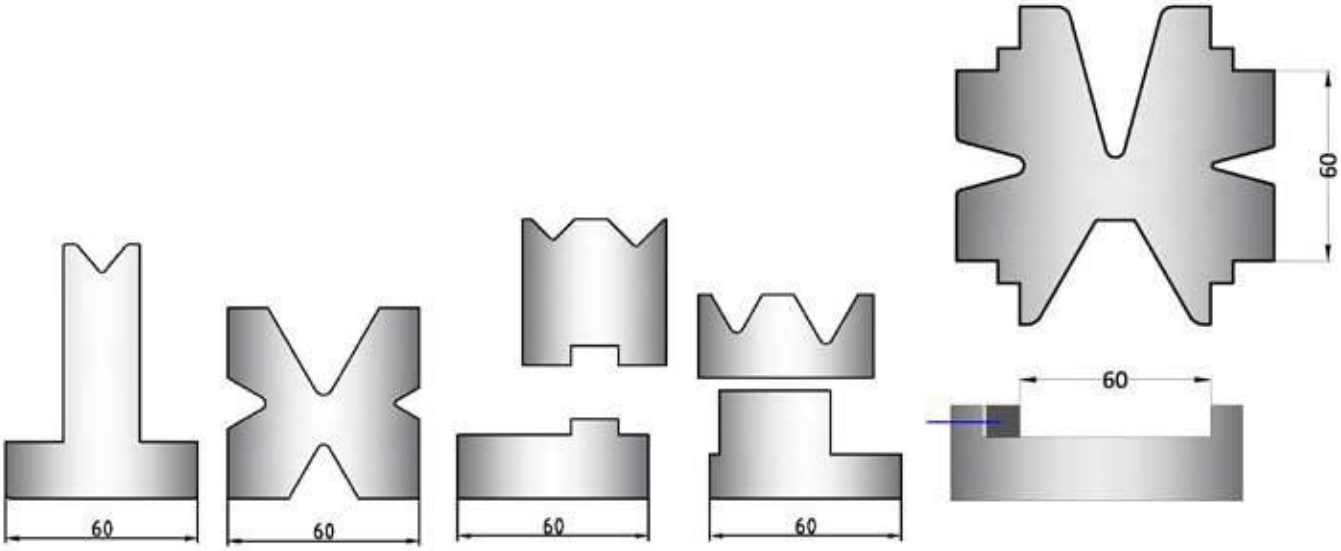


Westermann24 liefert Ihnen Lösungen für Halter mit Einsatz.
(S. 163)

Unterwerkzeuge / Lower tools

direkt einsetzbar auf Abkantpressen von / directly able to work on bending presses of:
Amada, Atlantic, Adira, Bystronic-Beyeler Euro-B, CR-Electronic, Durmazlar, Ermaksan, Gasparini, Guifil, Haco, Imal, Mecos, Megobal, Promecam, SMD...

Orange Line



direkt einsetzbar auf Abkantpressen von:
Amada,Atlantic,Adira,Bystronic-Beyeler Euro-B,
CR-Electronic, Durmazlar, Ermaksan, Gasparini,
Guifil, Haco,Imal,Mecos, Megobal,Promecam,
SMD, u.v.m.

directly able to work on bending presses of:
Amada,Atlantic,Adira,Bystronic-Beyeler Euro-B,
CR-Electronic, Durmazlar, Ermaksan, Gasparini,
Guifil, Haco,Imal,Mecos, Megobal,Promecam,
SMD, and others

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Oberwerkzeuge:
OW 835mm sektioniert in : 10,15,20,40,50,200,300,100 Horn links, 100 Horn rechts

Unterwerkzeuge:
UW 835mm sektioniert in: 10,15,20,40,50,100,200,400

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden.
(siehe Seite 161)

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

design:
All radii are grinded and hardened

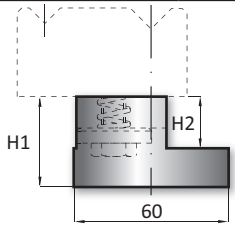
length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

tool sets divided into sections:
Upper tool:
OW 835mm sectioned in : 10,15,20,40,50,200,300,100 horn left, 100 horn right

lower tool:
UW 835mm sectioned in: 10,15,20,40,50,100,200,400

loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

	H1	H2	T/mt	Mt
20.200	34.00	20.00	100	I
20.316	39.00	20.00	100	I
20.201	55.00	35.00	100	I
20.306	75.00	55.00	100	I



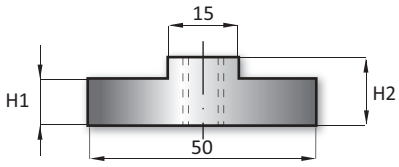
415 mm

835 mm

	H1	H2	T/mt	Mt
20.287	10.00	15.00	100	I

415 mm

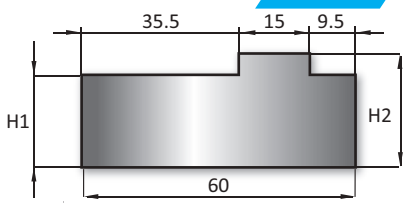
835 mm



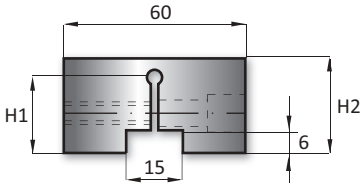
	H1	H2	T/mt	Mt
20.400	20.00	25.00	100	I

415 mm

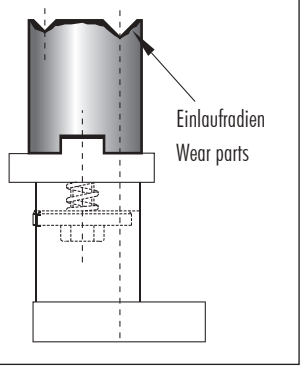
835 mm

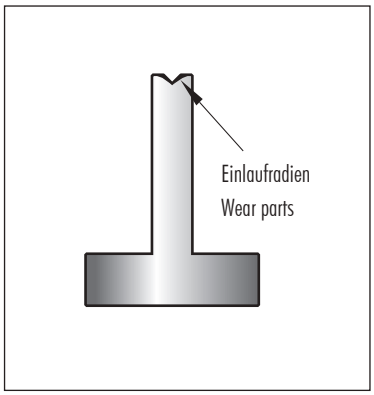


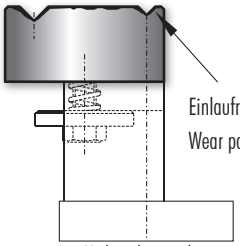
	H1	H2	Mt
20.336	20.00	25.00	I



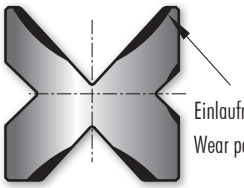
Montageanleitung - Assembly Instructions



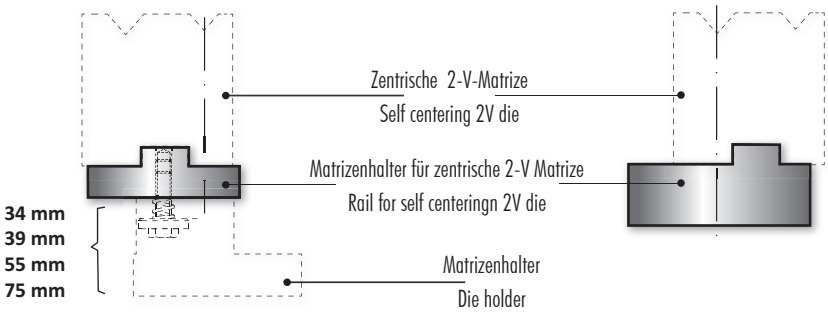


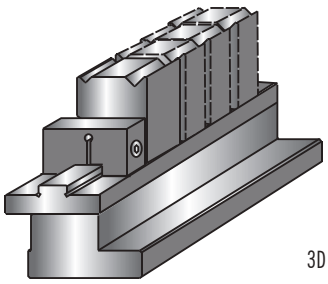


Nicht sektionierbar
Not sectioning

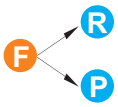


Montagebeispiel - Assembly Scheme





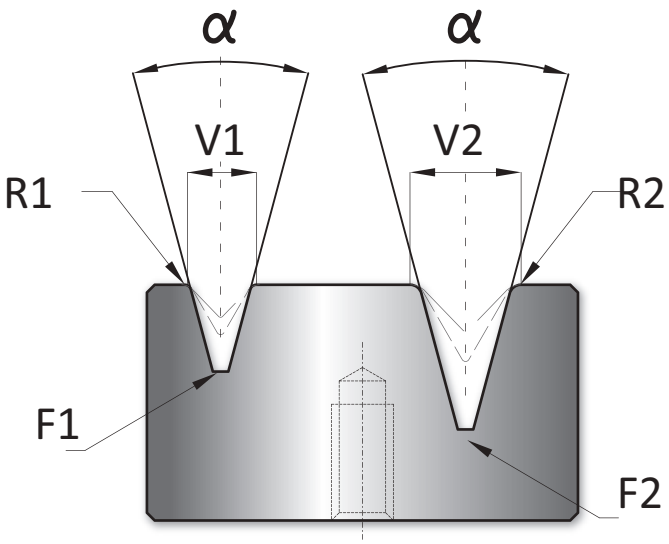
3D Ansicht
3D view

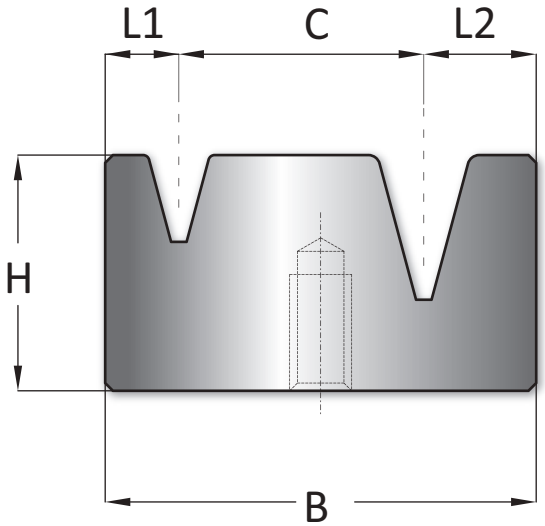


	α	V1	V2	R1	R2	F1	F2	L1	L2	H	B	C	T/mt	Mt
20.295	90°	4	7	0,3	0,5	R0,5	R 0,5	4	7	26	55	44	100	I
20.202	90°	6	10	0,4	0,6	R0,5	R 0,5	6	10	26	55	39	100	I
20.203	90°	8	12	0,5	0,8	R 0,5	R 0,5	8	10	26	55	37	100	I
21.202	88°	6	10	0,8	1,2	R 0,5	R 0,5	6	10	26	55	39	100	I
20.338	88°	8	12	1,0	1,5	R 0,5	R 0,5	8	10	26	55	37	100	I
20.204	88°	12	20	2,75	3,0	R 0,5	R 0,5	10	15	26	55	30	100	I
20.296	88°	14	18	2,75	3,0	R 0,5	R 0,5	11	13	26	55	31	100	I
20.205	88°	16	25	2,75	3,0	R 0,5	R 0,5	12	16,5	26	55	26,5	100	I
20.235	60°	6	10	0,4	0,6	R 0,5	R 0,5	6	10	26	55	39	60	I
20.229	60°	8	12	0,5	0,8	R 0,5	R 0,5	8	10	26	55	37	60	I
20.230	60°	12	20	0,8	1,5	R 0,5	R 0,5	10	15	26	55	30	60	I
20.267	60°	16	20	1,6	2,0	R 0,7	R 0,7	12	15	26	55	28	60	I
20.418	30°	8	12	0,8	1,5	P 2,0	P 2,0	9,5	14,5	46	50	26	40	I

415 mm

835 mm





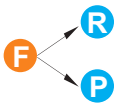
90°

88°

60°

30°

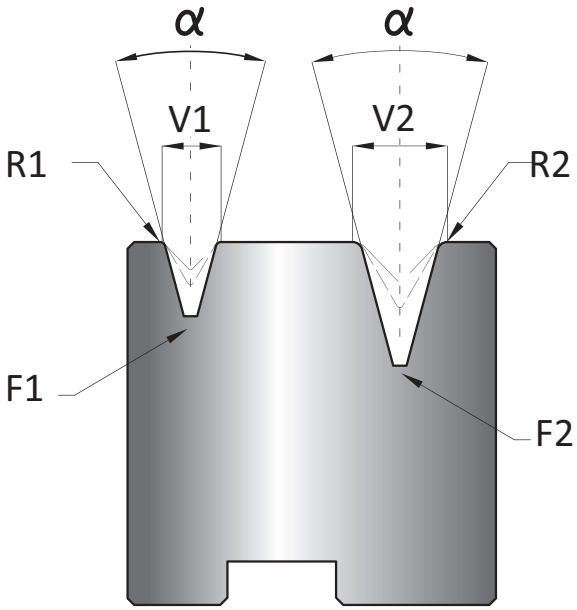
Legende - Legend	Technik - technique
F = Nutgrund - ground of the groove	
R = radius	
P = flach - flat	

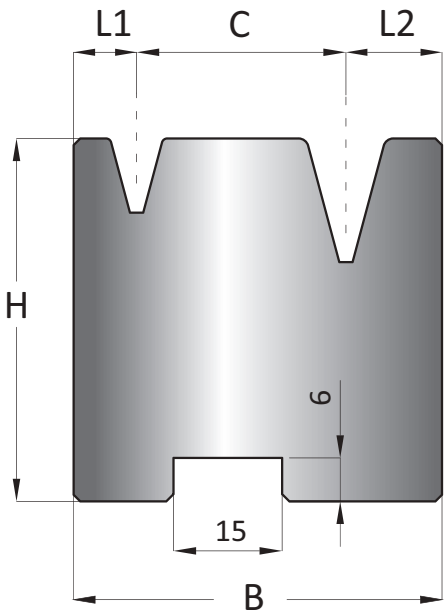


	α	V1	V2	R1	R2	F1	F2	L1	L2	H	B	C	T/mt	Mt
20.275	90°	4	7	0,3	0,5	R0,5	R 0,5	3,5	5	46	34,5	26	80	I
20.276	90°	6	10	0,4	0,6	R0,5	R 0,5	4,5	6,5	46	37	26	80	I
20.277	90°	8	12	0,5	0,8	R 0,5	R 0,5	5,5	7,5	46	39	26	80	I
21.275	88°	4	7	0,6	1,0	R 0,5	R 0,5	3,5	5	46	34,5	26	80	I
21.276	88°	6	10	0,8	1,2	R 0,5	R 0,5	4,5	6,5	46	37	26	80	I
20.339	88°	8	12	1,0	1,5	R 0,5	R 0,5	5,5	7,5	46	39	26	80	I
20.279	88°	12	20	0,8	1,75	R 0,5	R 0,5	7,5	12	46	45,5	26	80	I
20.278	88°	14	18	1,25	1,5	R 0,5	R 0,5	8,5	10,5	46	45	26	80	I
20.280	88°	16	25	1,5	1,75	R 0,5	R 0,5	9,5	14,5	46	50	26	80	I
20.344	85°	4	7	0,6	1,0	R 0,5	R 0,5	3,5	5	46	34,5	26	80	I
20.345	85°	6	10	1,0	1,5	R 0,5	R 0,5	4,5	6,5	46	37	26	80	I
20.346	85°	8	12	1,2	1,75	R 0,7	R 0,7	5,5	7,5	46	39	26	80	I
20.347	85°	12	20	1,75	2,5	R 0,5	R 0,5	7,5	12	46	45,5	26	80	I
20.349	85°	14	18	1,5	2,0	R 0,7	R 0,7	8,5	10,5	46	45	26	80	I
20.348	85°	16	25	2,0	3,0	R 0,5	R 0,5	9,5	14,5	46	50	26	80	I
20.438	30°	10	10	0,6	1,0	R 1,0	P 2,0	7	12	46	45	26	40	I
20.478	30°	12	12	0,8	1,5	P 2,0	P 2,0	9,5	14,5	46	50	26	40	I

415 mm

835 mm





90°

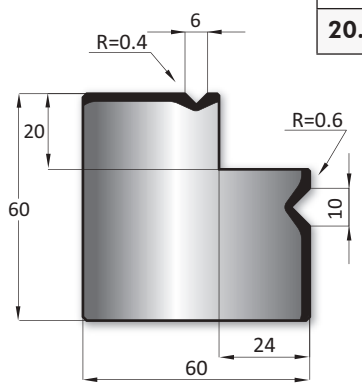
88°

85°

30°

Legende - Legend	Technik - technique
F = Nutgrund - ground of the groove	
R = radius	
P = flach - flat	

	α	T/mt	Mt
20.208	90°	80	I



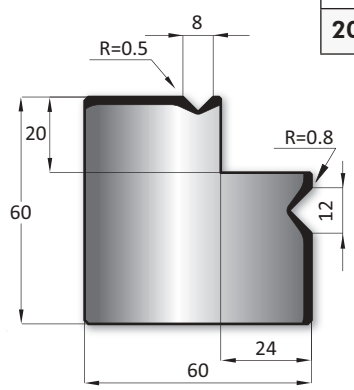
415 mm

835 mm

835 mm

90°

	α	T/mt	Mt
20.237	90°	80	I



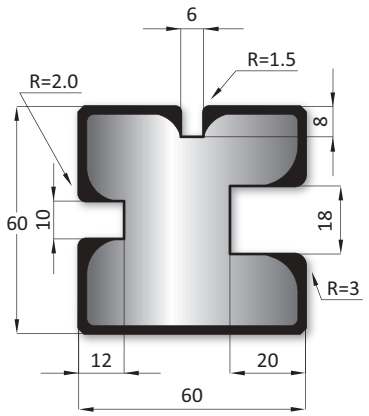
415 mm

835 mm

835 mm

90°

	T/mt	Mt
21.209	100	I

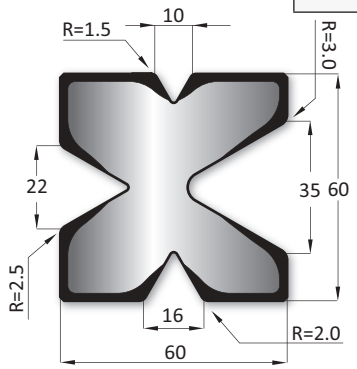


415 mm

835 mm

835 mm

	α	T/mt	Mt
20.350	60°	60	I



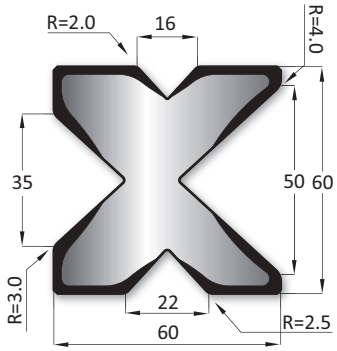
415 mm

835 mm

835 mm

60°

	α	T/mt	Mt
21.207	85°	80	I



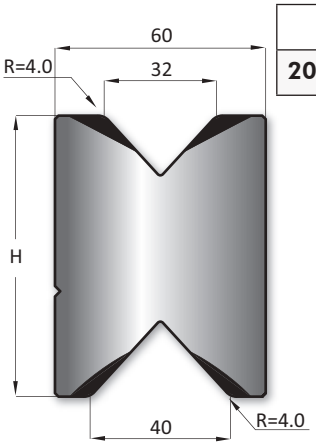
415 mm

835 mm

835 mm

85°

	α	H	T/mt	Mt
20.820	85°	80.00	100	I



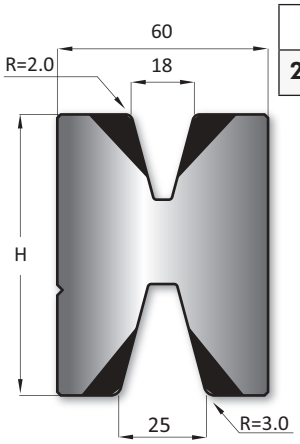
415 mm

835 mm

835 mm

85°

	α	H	T/mt	Mt
20.830	30°	80.00	100	I



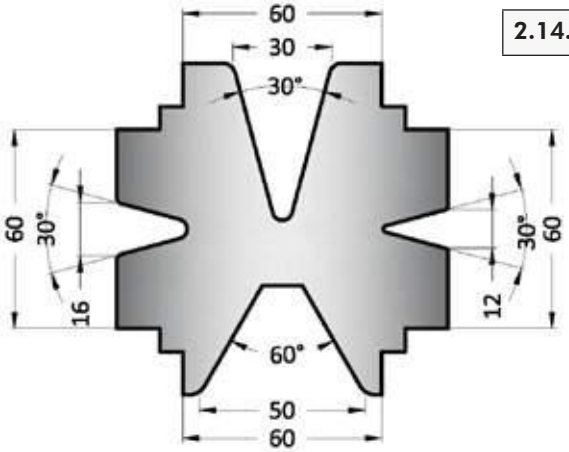
415 mm

835 mm

835 mm

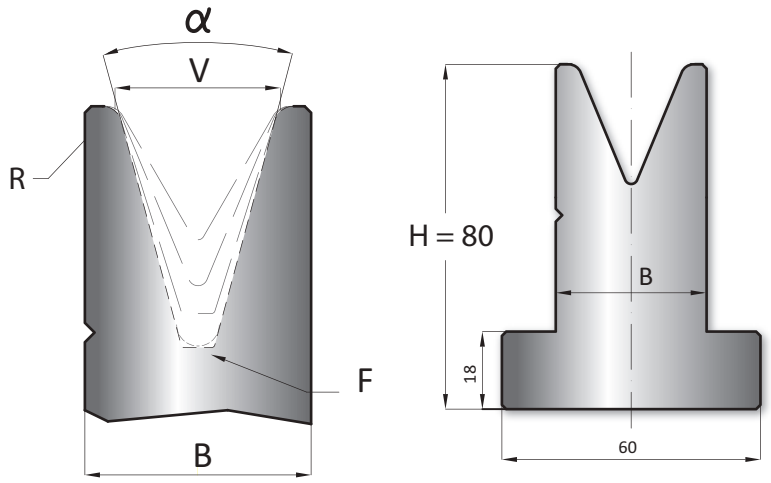
30°

2.14.309



Orange Line

H=80

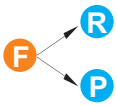


415 mm

835 mm

835 mm

Passende Adapterschiene auf S 182



90°	V	R	B	F	T/mt	Mt
20.243	6	0,4	14	R 0,5	100	I
20.258	8	0,5	14	R 0,5	100	I
20.244	10	0,6	18	R 0,5	100	I
20.245	12	0,8	18	R 0,5	100	I
20.246	16	1,0	24	R 0,5	100	I

88°	V	R	B	F	T/mt	Mt
20.806	6	0,8	14	R 0,5	100	I
20.808	8	1,0	14	R 0,5	100	I
20.810	10	1,2	18	R 0,5	100	I
20.371	12	1,5	18	R 0,5	100	I
20.327	16	2,0	24	R 0,5	100	I
20.310	20	2,0	30	R 1,0	100	I
20.309	25	3,0	35	R 1,0	100	I

85°	V	R	B	F	T/mt	Mt
20.506	6	1,5	14	R 0,5	100	I
20.508	8	2,0	14	R 0,5	100	I
20.510	12	2,5	18	R 0,5	100	I
20.512	12	3,0	18	R 0,5	100	I
20.516	16	3,5	24	R 0,5	100	I
20.520	20	4,0	30	R 1,0	100	I
20.525	25	5,0	35	R 1,0	100	I

85°	V	R	B	H	T/mt	Mt
20.210	32	4.00	60	60.00	100	I
20.211	40	4.00	60	60.00	100	I
20.212	50	4.00	60	60.00	100	I
20.213	63	5.00	80	75.00	100	I
20.214	80	6.00	95	80.00	100	I
20.215	100	7.00	120	95.00	100	I

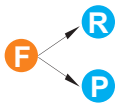
80°	V	R	H	T/mt	Mt
2.13.320	16				
2.13.321	20				
2.13.322	24				
2.13.323	30				
2.13.324	35				
2.13.325	40				
2.13.326	50				
2.13.327	60				
20.216	125	9.00	103.00	100	I
20.217	160	10.00	130.00	100	I
20.125	125	9.00	103.00	100	I
20.160	160	10.00	130.00	100	I

90°

88°

85°

80°



60°	V	R	B	F	T/mt	Mt
20.297	6	0,4	14	R 0,5	60	I
20.298	8	0,5	14	R 0,5	60	I
20.299	10	0,6	18	R 0,5	60	I
20.300	12	0,8	18	R 0,5	60	I
20.301	16	1,6	24	R 0,7	60	I
20.308	20	2,0	30	R 1,0	60	I
20.311	25	3,0	35	R 1,0	60	I

35°	V	R	B	F	T/mt	Mt
20.406	6	1,5	14	R 1,0	40	I
20.408	8	2,0	18	P 2,0	40	I
20.410	10	2,5	24	P 2,0	55	I
20.412	12	3,0	24	P 2,0	45	I
20.416	16	3,5	30	P 2,0	50	I
20.420	20	4,0	35	P 5,0	60	I
20.425	25	5,0	40	P 5,0	60	I

60°	V	R	B	H	T/mt	Mt
2.13.315	30					
2.13.316	35					
2.13.317	40					
20.650	50	5.00	75	75.00	100	I
20.370	63	5.00	86	86.00	100	I
20.680	80	6.00	115	115.00	100	I

30°	V	R	B	F	T/mt	Mt
20.317	6	0,6	14	R 1,0	35	I
20.318	8	0,8	18	P 2,0	35	I
20.319	10	1,0	24	P 2,0	50	I
20.320	12	1,5	24	P 2,0	40	I
20.321	16	2,0	30	P 5,0	45	I
20.322	20	2,5	35	P 5,0	50	I
20.323	25	3,0	40	P 5,0	50	I

45°	V	R	B	F	T/mt	Mt
20.328	6	0,6	14	R 0,8	50	I
20.329	8	0,8	18	R 0,8	50	I
20.330	10	1,0	18	R 0,8	50	I
20.331	12	1,5	24	R 0,8	50	I
20.332	16	2,0	24	R 1,5	50	I
20.333	20	2,5	30	R 1,5	50	I
20.334	25	3,0	35	R 1,5	50	I

30°	V	R	B	H	T/mt	Mt
2.13.310	30					
2.13.311	35					
20.494	18	2.00	60	60.00	100	I
20.325	25	3.00	60	60.00	100	I

45°	V	R	B	H	T/mt	Mt
20.484	32	4.00	60	80.00	100	I
20.440	40	4.00	75	75.00	100	I
20.380	80	6.00	145	145.00	100	I

Legende - Legend	Technik - technique
F = Nutgrund - ground of the groove	
R = radius	
P = flach - flat	

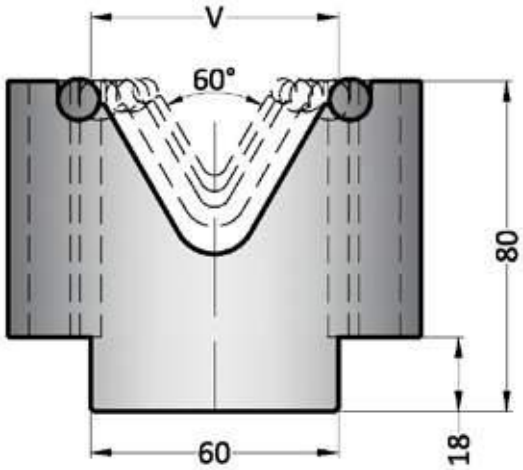
60°

45°

35°

30°

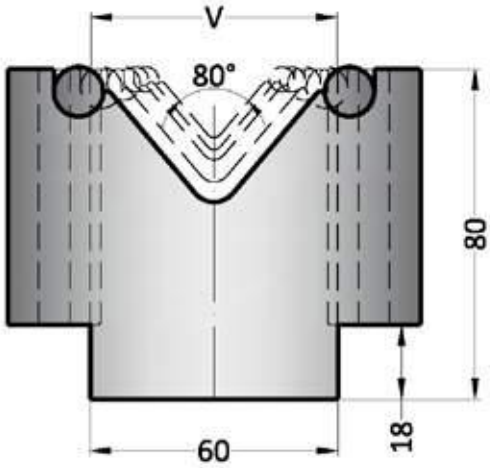
	V	α	H
2.22.010	30	60°	80.00
2.22.011	35	60°	80.00
2.22.012	40	60°	80.00
2.22.013	50	60°	80.00
2.22.014	60	60°	80.00



Westermann-T - mit Einlaufwellen 60°

60°

	V	α	H
2.22.015	30	80°	80.00
2.22.016	35	80°	80.00
2.22.017	40	80°	80.00
2.22.018	50	80°	80.00
2.22.019	60	80°	80.00



Westermann-T - mit Einlaufwellen 80°

Passende Adapterschiene auf S 182

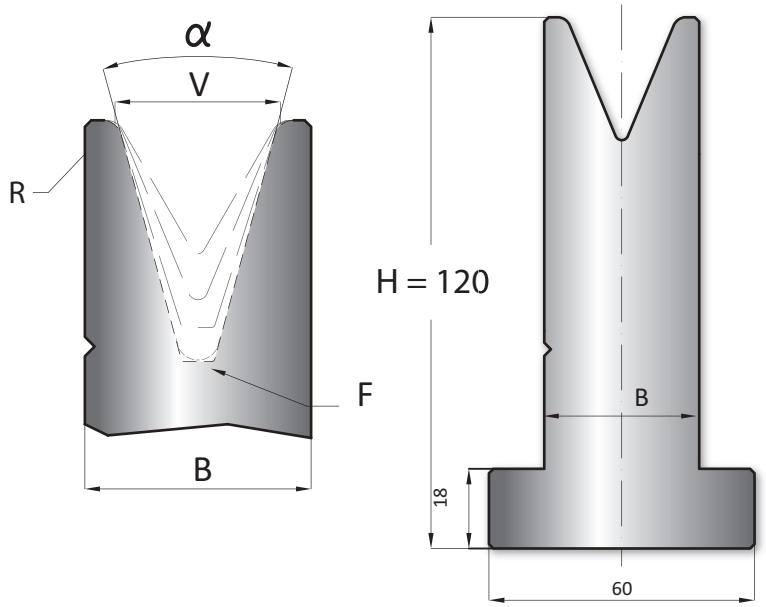
80°

H=120

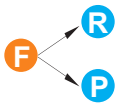
415 mm

835 mm

835 mm



Legende - Legend	Technik - technique
F = untere Matrize - bottom die	
R = radius	
P = flach - flat	



90°	V	R	B	F	T/mt	Mt
20.361	6	0,4	14	R 0,5	100	I
20.362	8	0,5	14	R 0,5	100	I
20.363	10	0,6	18	R 0,5	100	I
20.364	12	0,8	18	R 0,5	100	I
20.381	16	1,0	24	R 0,5	100	I

88°	V	R	B	F	T/mt	Mt
21.806	6	0,8	14	R 0,5	100	I
21.808	8	1,0	14	R 0,5	100	I
21.810	10	1,2	18	R 0,5	100	I
20.382	12	1,5	18	R 0,5	100	I
20.383	16	2,0	24	R 0,5	100	I
20.384	20	2,0	30	R 1,0	100	I
20.385	25	3,0	35	R 1,0	100	I

85°	V	R	B	F	T/mt	Mt
21.506	6	1,5	14	R 0,5	100	I
21.508	8	2,0	14	R 0,5	100	I
21.510	12	2,5	18	R 0,5	100	I
21.512	12	3,0	18	R 0,5	100	I
21.516	16	3,5	24	R 0,5	100	I
21.520	20	4,0	30	R 1,0	100	I
21.525	25	5,0	35	R 1,0	100	I

85°	V	R	B	H	T/mt	Mt
20.210	32	4.00	60	60.00	100	I
20.211	40	4.00	60	60.00	100	I
20.212	50	4.00	60	60.00	100	I
20.213	63	5.00	80	75.00	100	I
20.214	80	6.00	95	80.00	100	I
20.215	100	7.00	120	95.00	100	I

80°	V
2.14.324	16
2.14.325	20
2.14.326	24
2.14.327	30
2.14.328	35
2.14.329	40
2.14.330	50
2.14.331	60
2.14.332	80
2.14.333	100
2.14.334	120

Passende Adapterschiene auf S 182

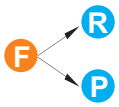
80°	V	R	H	T/mt	Mt
20.216	125	9.00	103.00	100	I
20.217	160	10.00	130.00	100	I
20.125	125	9.00	103.00	100	I
20.160	160	10.00	130.00	100	I

90°

88°

85°

80°



60°	V	R	B	F	T/mt	Mt
20.386	6	0,4	14	R 0,5	60	I
20.387	8	0,5	14	R 0,5	60	I
20.388	10	0,6	18	R 0,5	60	I
20.389	12	0,8	18	R 0,5	60	I
20.390	16	1,6	24	R 0,7	60	I
20.391	20	2,0	30	R 1,0	60	I
20.392	25	3,0	35	R 1,0	60	I

35°	V	R	B	F	T/mt	Mt
21.406	6	1,5	14	R 1,0	40	I
21.408	8	2,0	18	P 2,0	40	I
21.410	10	2,5	24	P 2,0	55	I
21.412	12	3,0	24	P 2,0	45	I
21.416	16	3,5	30	P 2,0	50	I
21.420	20	4,0	35	P 5,0	60	I
21.425	25	5,0	40	P 5,0	60	I

60°	V	R	B	H	T/mt	Mt
2.14.316	30					
2.14.317	35					
2.14.318	40					
20.650	50	5,0	75	75	100	I
20.370	63	5,0	86	86	100	I
20.680	80	6,0	115	115	100	I
2.14.322	100					
2.14.323	120					

30°	V	R	B	F	T/mt	Mt
20.351	6	0,6	14	R 1,0	35	I
20.352	8	0,8	18	P 2,0	35	I
20.353	10	1,0	24	P 2,0	50	I
20.354	12	1,5	24	P 2,0	40	I
20.401	16	2,0	30	P 5,0	45	I
20.402	20	2,5	35	P 5,0	50	I
20.403	25	3,0	40	P 5,0	50	I

45°	V	R	B	F	T/mt	Mt
20.393	6	0,6	14	R 0,8	50	I
20.394	8	0,8	18	R 0,8	50	I
20.395	10	1,0	18	R 0,8	50	I
20.396	12	1,5	24	R 0,8	50	I
20.397	16	2,0	24	R 1,5	50	I
20.398	20	2,5	30	R 1,5	50	I
20.399	25	3,0	35	R 1,5	50	I

30°	V	R	B	H	T/mt	Mt
2.14.310	30					
2.14.311	35					
2.14.312	40					
20.494	18	2,0	60	60	100	I
20.325	25	3,0	60	60	100	I

45°	V	R	B	H	T/mt	Mt
20.484	32	4,0	60	80	100	I
20.440	40	4,0	75	75	100	I
20.380	80	6,0	145	145	100	I

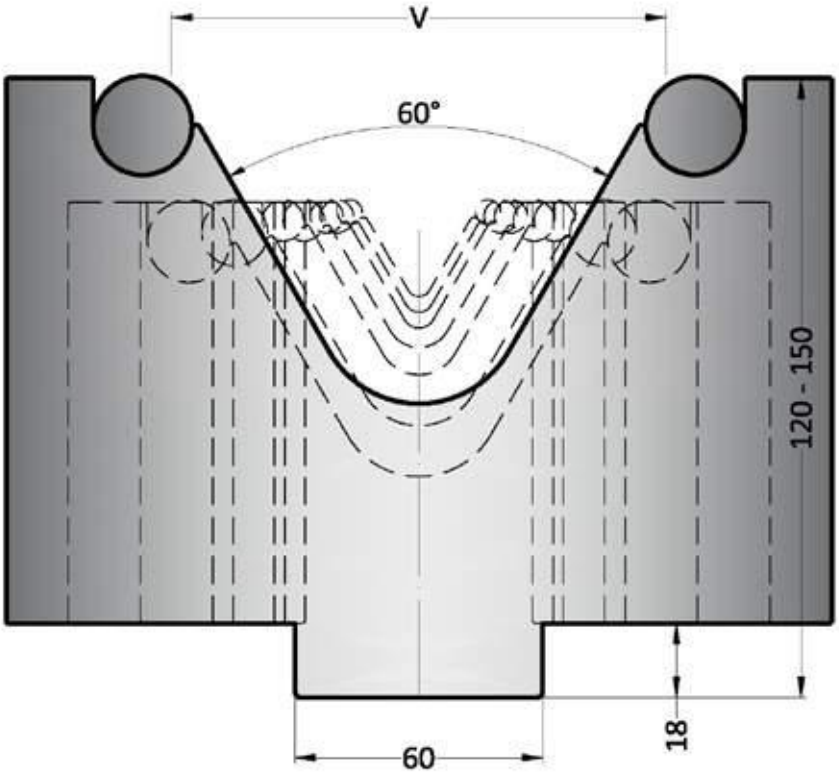
Legende - Legend	Technik - technique
F = Nutgrund - ground of the groove	
R = radius	
P = flach - flat	

60°

45°

35°

30°

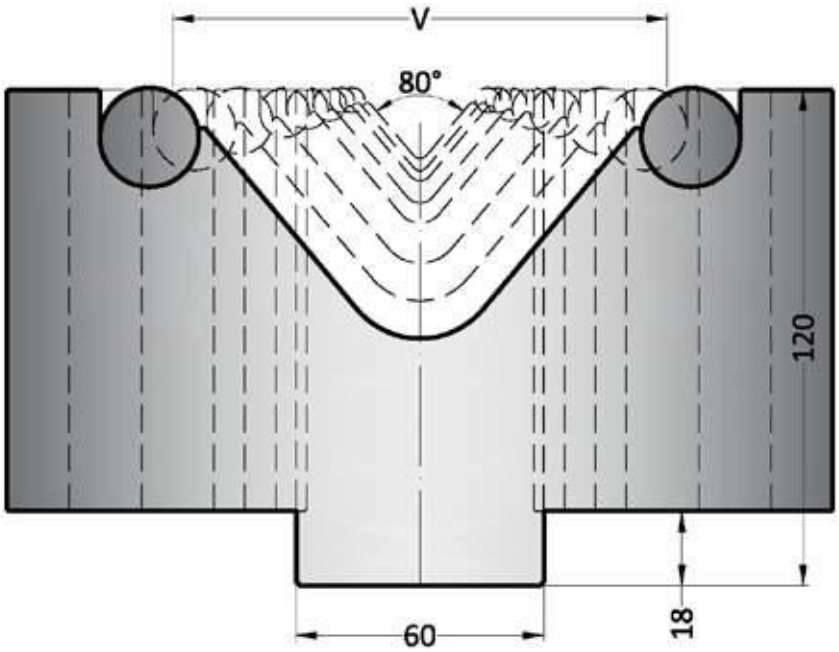


	V	α	H
2.23.011	30	60°	120.00
2.23.012	35	60°	120.00
2.23.013	40	60°	120.00
2.23.014	50	60°	120.00
2.23.015	60	60°	120.00
2.23.016	80	60°	120.00
2.23.017	100	60°	120.00
2.23.018	120	60°	120.00

Westermann 24 liefert Ihnen Matrizen mit Welleneinsatz. (S. 162)

Westermann-T - mit Einlaufwellen 60°

60°



	V	α	H
2.23.019	30	80°	120.00
2.23.020	35	80°	120.00
2.23.021	40	80°	120.00
2.23.022	50	80°	120.00
2.23.023	60	80°	120.00
2.23.024	80	80°	120.00
2.23.025	100	80°	120.00
2.23.026	120	80°	120.00

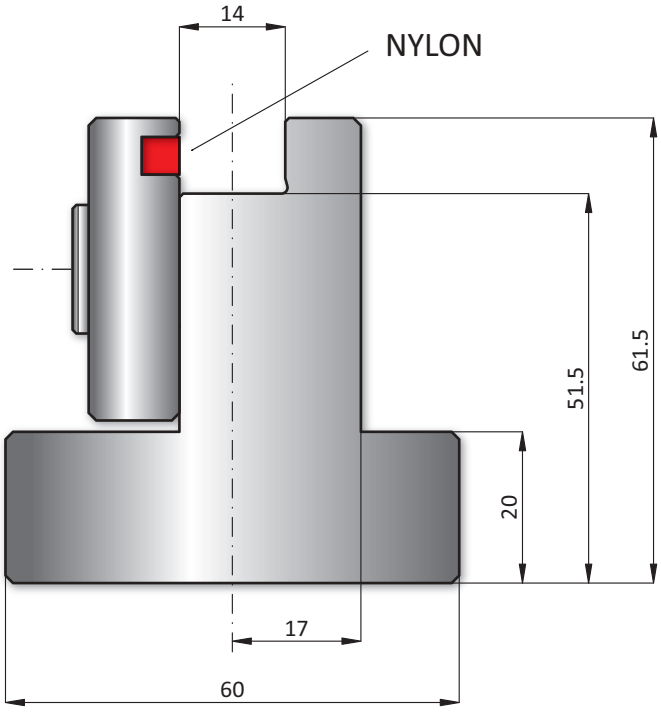
Westermann-T - mit Einlaufwellen 80°

80°

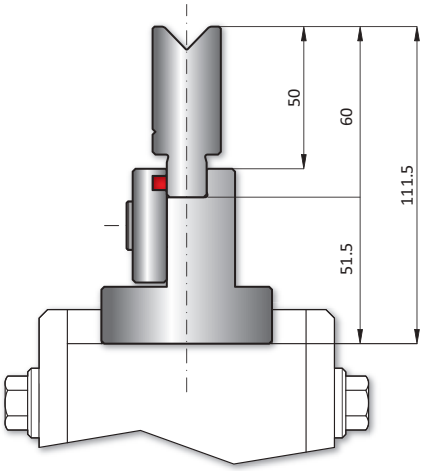
	Mt
22.010	I

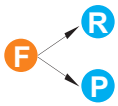
415 mm

835 mm



Montagebeispiel - Assembly Scheme



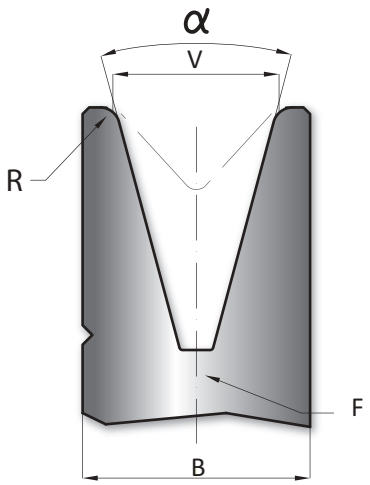


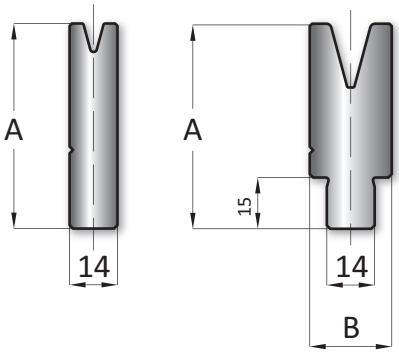
	α	V	A	B	R	F	T/mt	Mt
22.804	88°	4	60	14	0,6	R 0,5	100	I
22.806	88°	6	60	14	0,8	R 0,5	100	I
22.808	88°	8	60	14	1,0	R 0,5	100	I
22.810	88°	10	60	18	1,2	R 0,5	100	I
22.812	88°	12	60	18	1,5	R 0,5	100	I
22.816	88°	16	60	24	2,0	R 0,5	100	I
22.820	88°	20	60	30	2,0	R 1,0	100	I
22.825	88°	25	60	35	3,0	R 1,0	100	I
22.306	30°	6	60	14	0,6	R 1,0	35	I
22.308	30°	8	60	18	0,8	P 2,0	35	I
22.310	30°	10	60	24	1,0	P 2,0	50	I
22.312	30°	12	60	24	1,5	P 2,0	40	I
22.316	30°	16	60	30	2,0	P 5,0	45	I
22.320	30°	20	60	35	2,5	P 5,0	50	I
22.325	30°	25	65	45	3,0	P 8,0	50	I

415 mm

835 mm

835 mm





Legende - Legend	Technik - technique
F = Nutgrund - ground of the groove	
R = radius	
P = flach - flat	

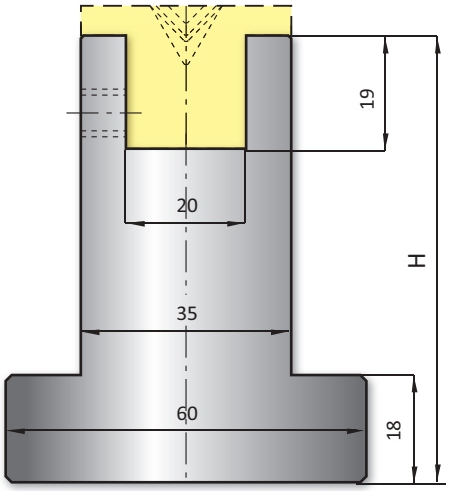
88°

30°

	H	Mt
22.002	75,00	I

415 mm

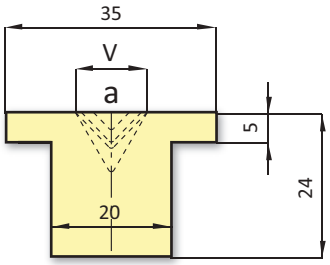
835 mm



Weitere Möglichkeiten für abdruckfreies Kanten (ab S. 177)

	V	α
32.306	**6**	30°
32.308	**8**	30°
32.310	**10**	30°
32.406	**6**	45°
32.408	**8**	45°
32.410	**10**	45°
32.412	**12**	45°
32.606	**6**	60°
32.608	**8**	60°

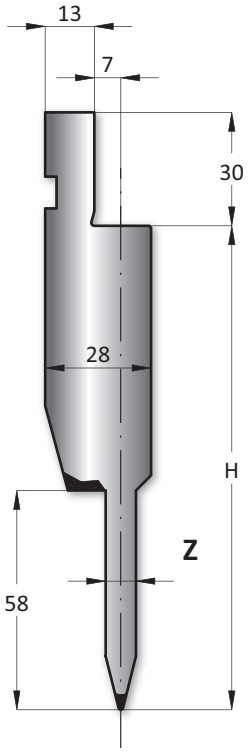
	V	α
32.610	**10**	60°
32.612	**12**	60°
32.616	**16**	60°
32.806	**6**	88°
32.808	**8**	88°
32.810	**10**	88°
32.812	**12**	88°
32.816	**16**	88°



20 T/mt

415 mm

835 mm



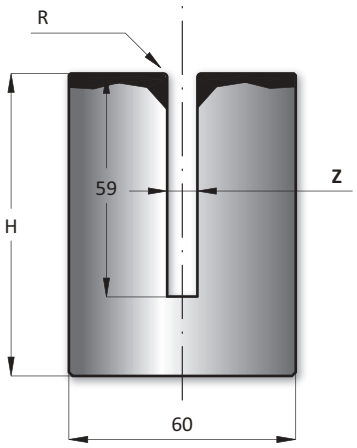
	α	R	H	Z	T/mt	Mt
11.550	24°	0.60	128.00	8	80	II
11.554	24°	0.60	128.00	10	80	II
11.560	24°	0.60	128.00	12	80	II

415 mm

835 mm

835 mm

24°



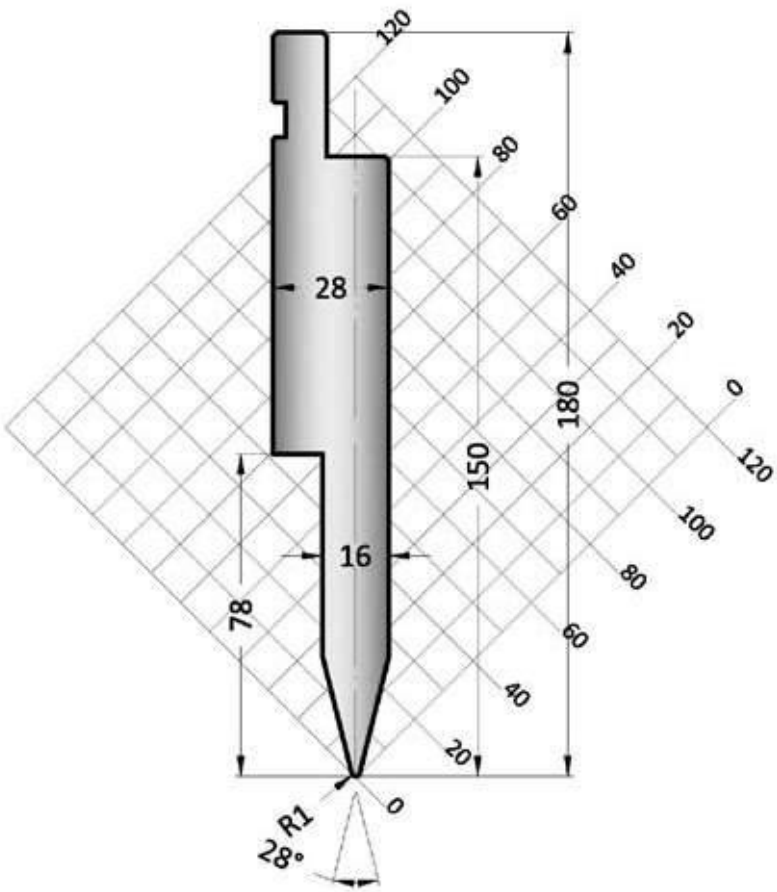
	R	H	Z	T/mt	Mt
20.550	1.00	80.00	8,2	50	II
20.554	1.00	80.00	10,2	50	II
20.560	1.00	80.00	12,2	50	II

415 mm

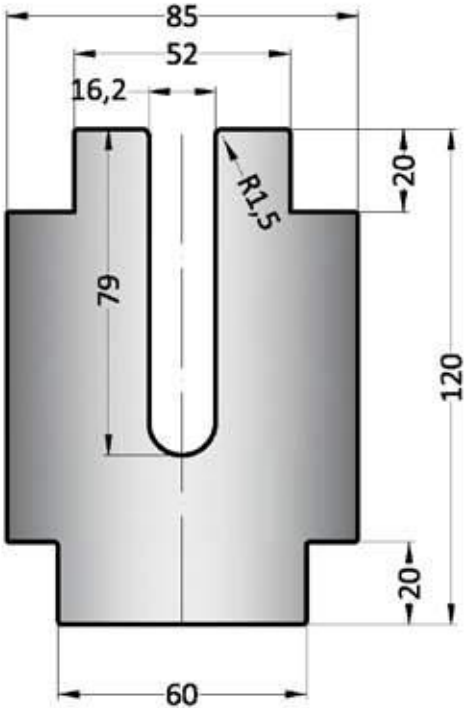
835 mm

835 mm

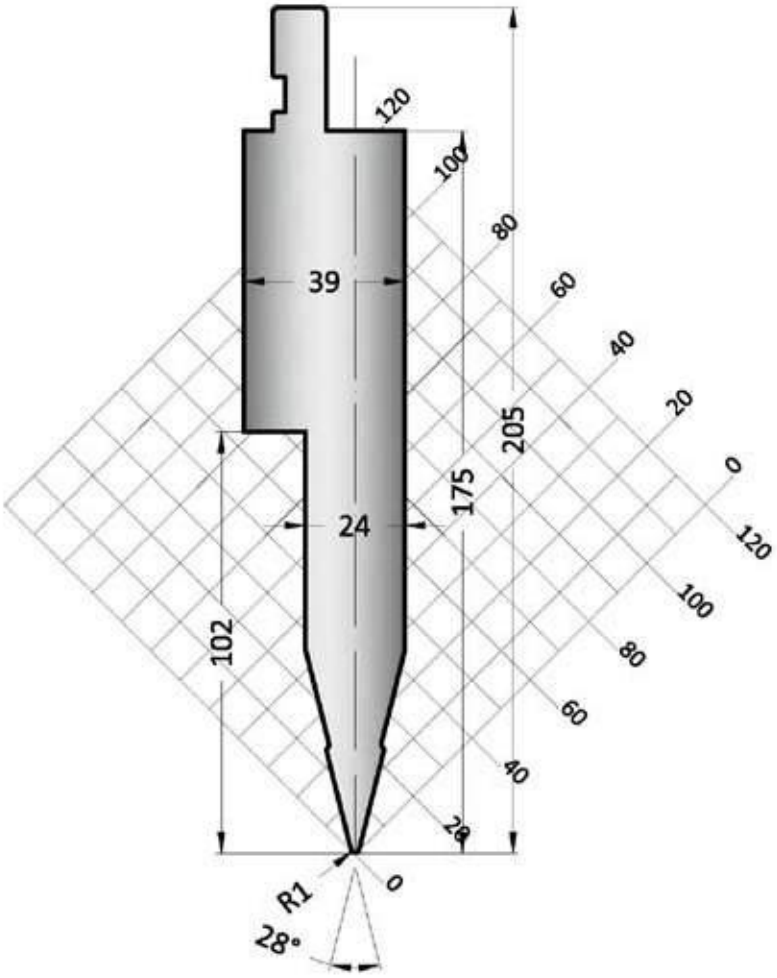
1.01.274



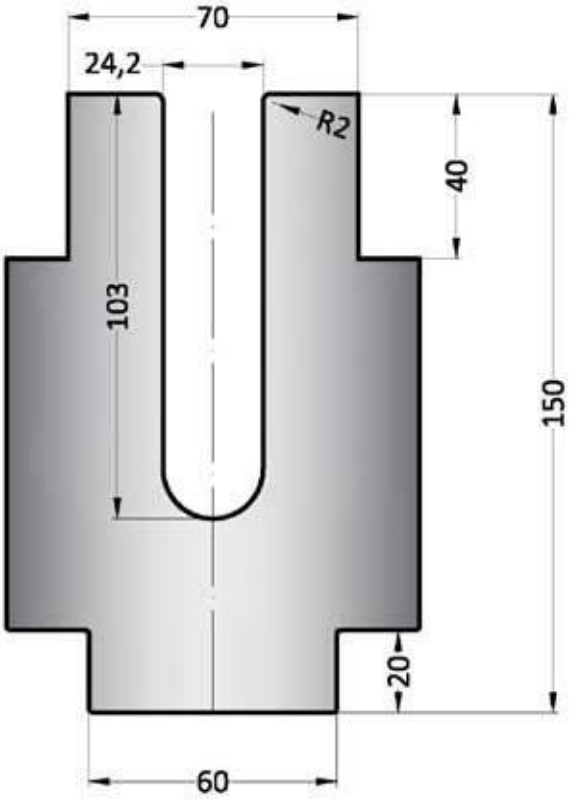
2.14.335



1.01.275



2.14.336



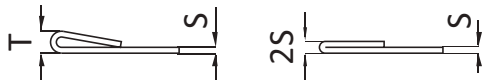
Presskrafttabelle für Umfalzarbeiten - Bending Scheme

S (mm)	(t/m)	T (mm)	(t/m)	2S (mm)
0,6	9	3	23	1,2
0,8	12	3	32	1,6
1,0	15	3,5	40	2,0
1,25	17	3,5	50	2,5
1,5	22	4,6	63	3,0
2,0	30	5,5	80	4,0
2,5	55	6,5	90	5,0
3,0	70	8,0	100	6,0

Material: R = 400 N/mm² (St)

S (mm)	(t/m)	T (mm)	(t/m)	2S (mm)
0,6	15	3	35	1,2
0,8	20	3	50	1,6
1,0	25	3,5	60	2,0
1,25	26	3,5	80	2,5
1,5	38	4,6	95	3,0
2,0	50	5,5	130	4,0

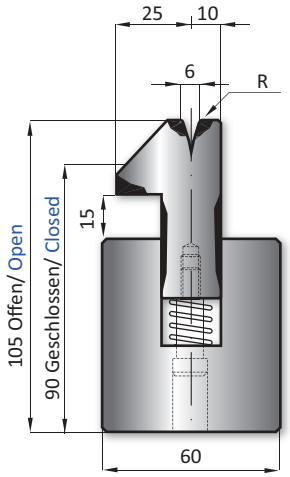
Material: R = 700 N/mm² (VA)



	α	R	T/mt	Mt
20.264	35°	1.00	60	III

415 mm

835 mm

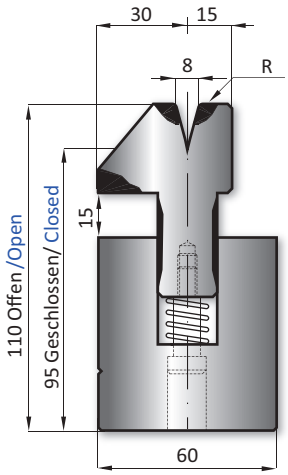


35°

	α	R	T/mt	Mt
20.303	30°	1.50	80	III

415 mm

835 mm

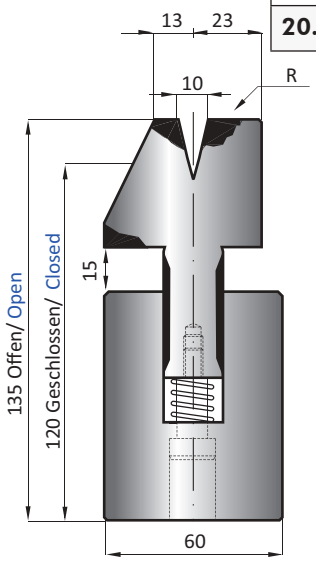


30°

	α	R	T/mt	Mt
20.231	26°	1.50	100	III

415 mm

835 mm

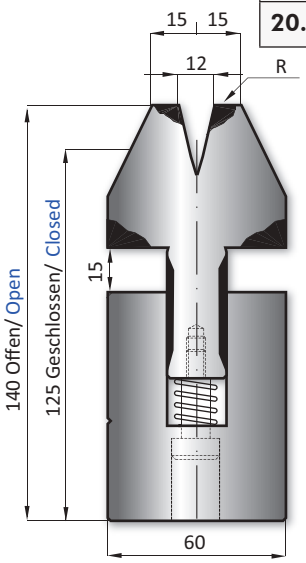


26°

	α	R	T/mt	Mt
20.305	26°	3.00	100	III

415 mm

835 mm



26°

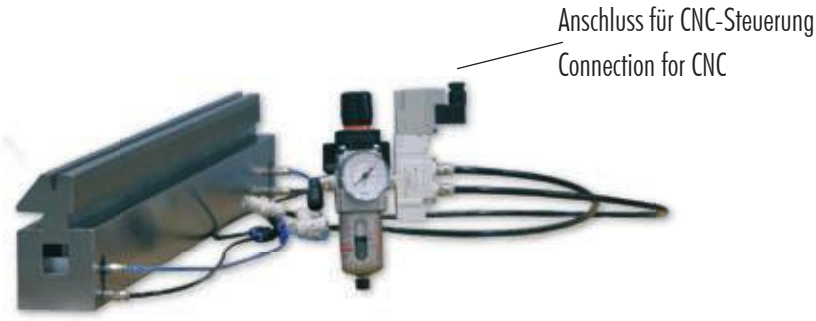
Pneumatische Zudrückmatrize - Pneumatic flattening dies

Vorteile

schnelleres Kanten durch 15 mm weniger Hub
präzisere Kantungen
weniger Verschleiß
an vorhandenen freien Steuerungsausgang 1/0 anschließbar

Advantages

saving 15 mm light and stroke with reduction of working time
more precise bending
less wear
could be connected to existing free control output1/0



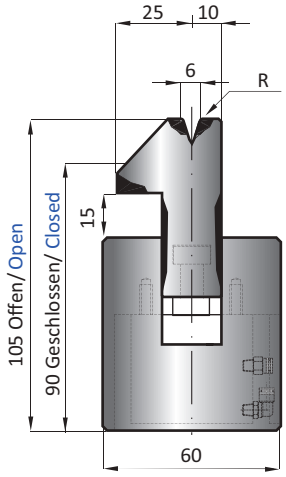
Zubehörsatz für pneumatische Zudrückmatrizen bestehend aus Druckreduzierventil und 12/24 V Elektromagnetventil

The pneumatic kit has to be connected to CNC press brake

	α	R	T/mt	Mt
20.264 P	35°	1.00	60	III

415 mm

835 mm

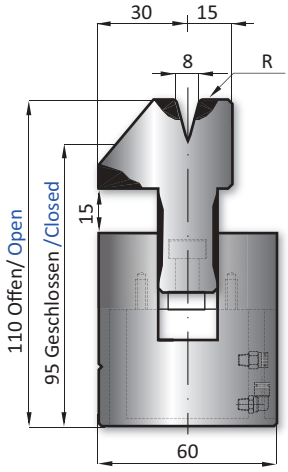


35°

	α	R	T/mt	Mt
20.303 P	30°	1.50	80	III

415 mm

835 mm

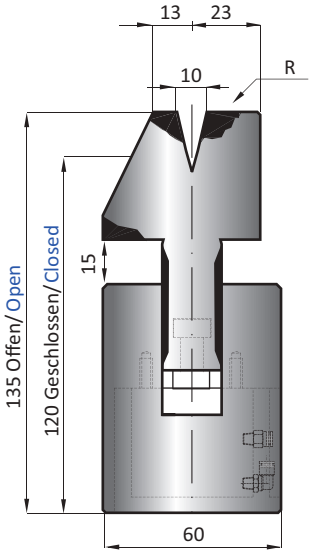


30°

	α	R	T/mt	Mt
20.231 P	26°	1.50	100	III

415 mm

835 mm

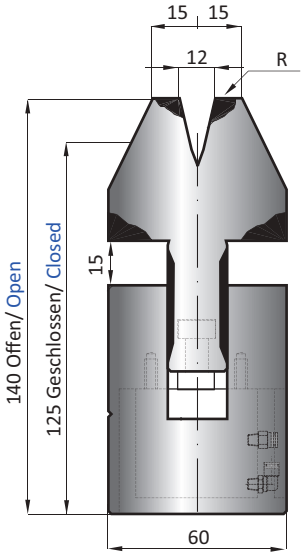


26°

	α	R	T/mt	Mt
20.305 P	26°	3.00	100	III

415 mm

835 mm



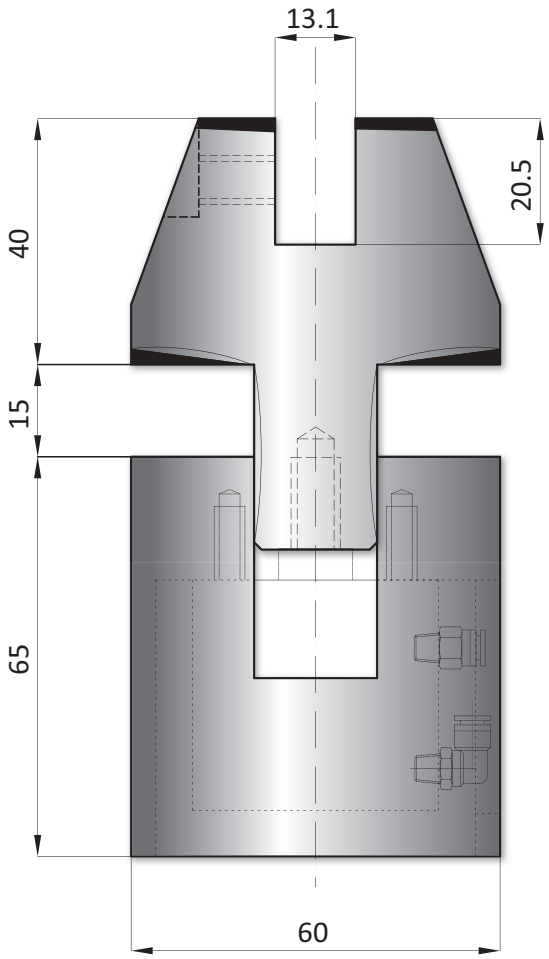
26°

Pneumatisches Zudrückwerkzeug für Wila/Trumpf und Beyeler - Pneumatic flattening tool for Wila/Trumpf and Beyeler dies

	T/mt	Mt
21.600	100	III

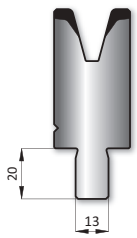
500 mm

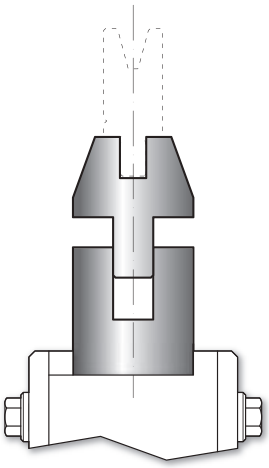
1000 mm



Montagebeispiel - Assembly Scheme

Nur Matrizen mit 30° 20 x 13
Only dies at 30° 20 x 13





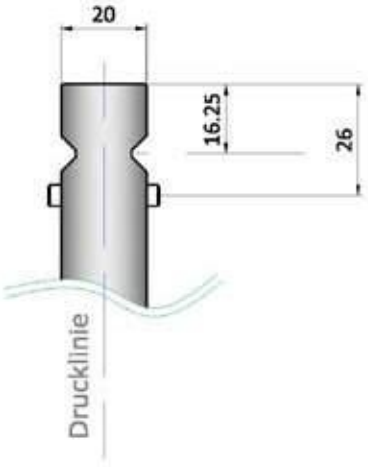
30°

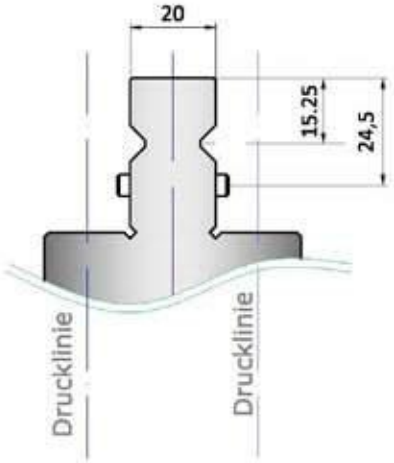
Oberwerkzeuge / Upper tools

direkt einsetzbar auf Abkantpressen von / directly able to work on bending presses of:

Trumpf, Bystronic - Hämmerle, LVD, oder für Abkantpressen mit Klemmsystem NSCL (New Standard Clamping)

Green Line





Der **Simple Clamp** ermöglicht den vertikalen Werkzeugwechsel / the **simple clamp** enables the horizontal change of the tool

direkt einsetzbar auf Abkantpressen von: Trumpf, Bystronic - Hämmerle, LVD, oder für Abkantpressen mit Klemmsystem NSCL (New Standard Clamping)

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Oberwerkzeuge:
OW 550mm sektioniert in : 25,25,30,35,40,45,50,100, 100 Horn links, 100 Horn rechts

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden. (siehe Seite 161)

directly able to work on bending presses of: Trumpf, Bystronic - Hämmerle, LVD, or for bending presses with NSCL (New Standard Clamping)

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

design:
All radii are grinded and hardened

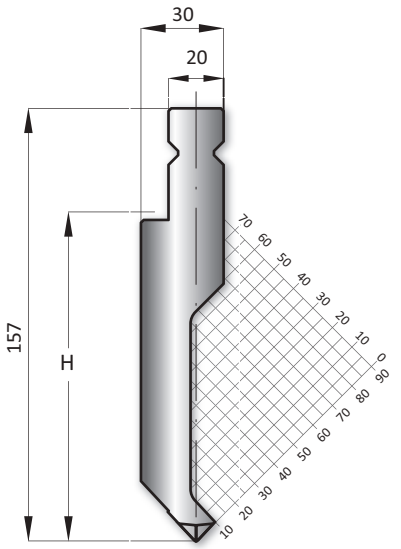
length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

tool sets divided into sections:
Upper tool:
OW 550mm sectioned in : 25,25,30,35,40,45,50,100, 100 horn left, 100 horn right

loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

	α	R	H	T/mt	Mt
15.330	86°	1.00	120.00	80	III
15.330 X	Simple Clamp (außer/not 500)				

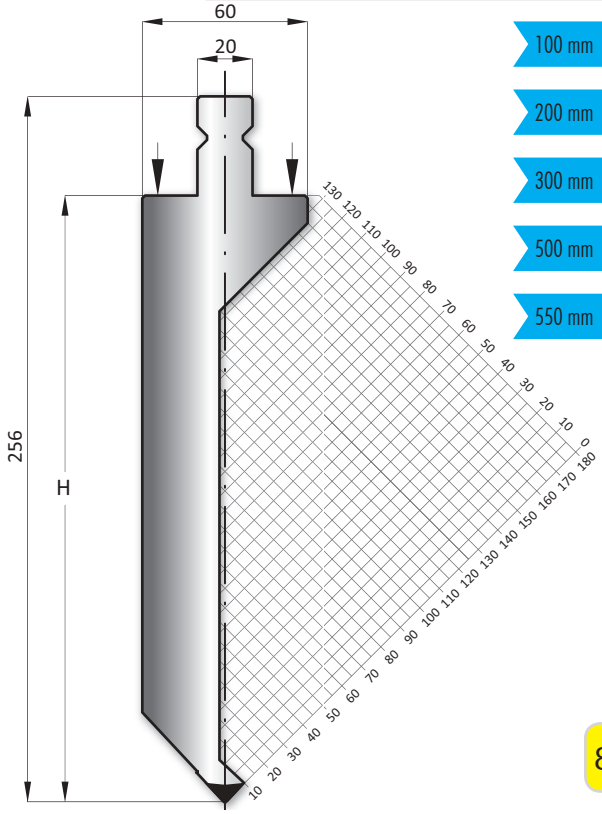
100 mm
200 mm
300 mm
500 mm
550 mm



86°

	α	R	H	T/mt	Mt
15.710	86°	1.00	220.00	80	III
15.710 X	Simple Clamp (außer/not 300 u. 500)				

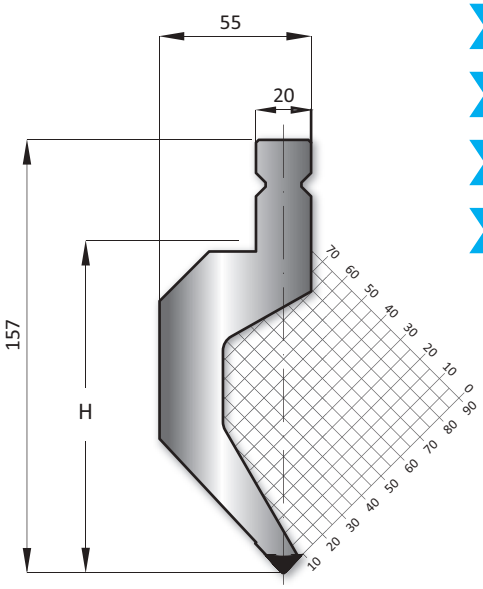
100 mm
200 mm
300 mm
500 mm
550 mm



86°

	α	R	H	T/mt	Mt
15.370	86°	1.00	120.00	80	III
15.370 X	Simple Clamp (außer/not 500)				

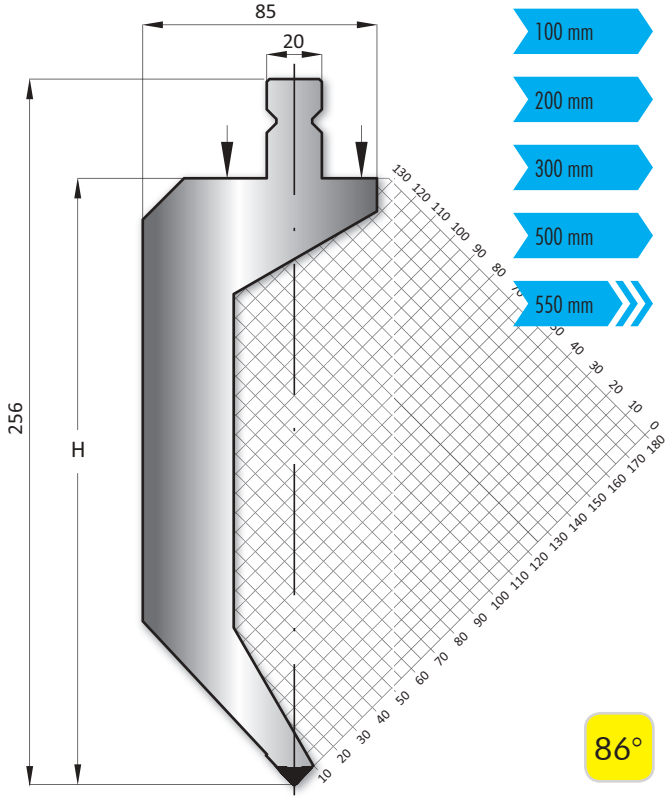
100 mm
200 mm
300 mm
500 mm
550 mm



86°

	α	R	H	T/mt	Mt
15.700	86°	1.00	220.00	80	III
15.700 X	Simple Clamp (außer/not 200, 300 u. 500)				

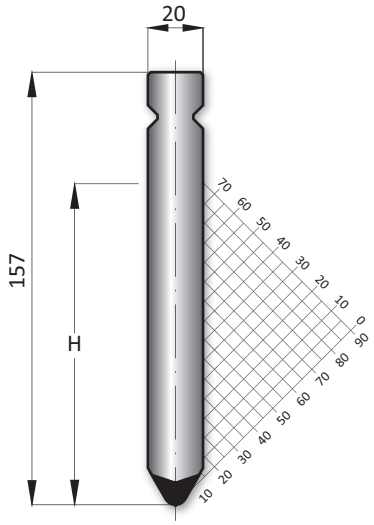
100 mm
200 mm
300 mm
500 mm
550 mm



86°

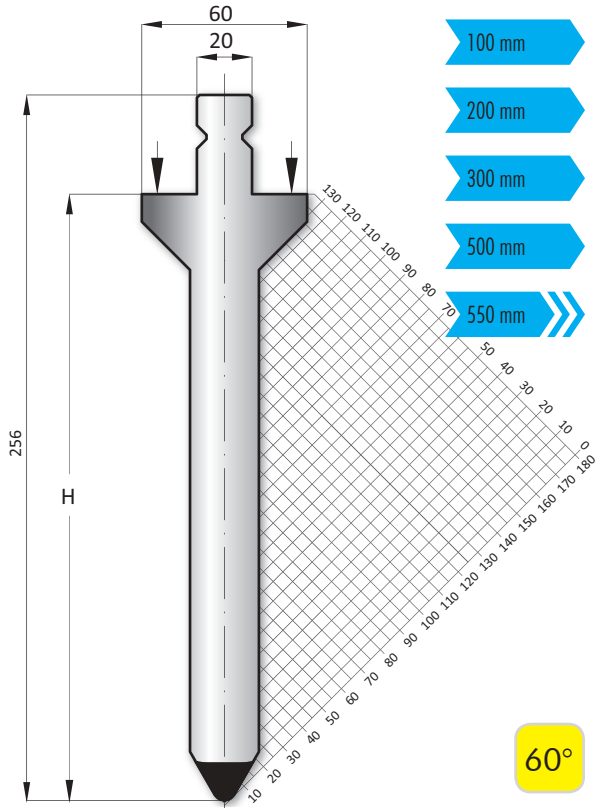
100 mm
200 mm
300 mm
500 mm
550 mm

	α	R	H	T/mt	Mt
15.310	60°	4.00	120.00	130	III
15.310 X	Simple Clamp				



60°

	α	R	H	T/mt	Mt
15.730	60°	4.00	220.00	130	III
15.730 X	Simple Clamp (außer/not 300 u. 500)				

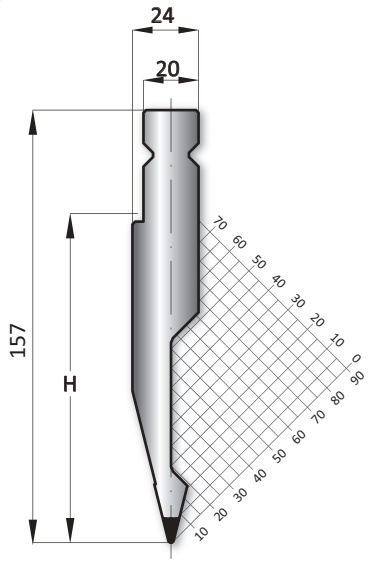


100 mm
200 mm
300 mm
500 mm
550 mm

60°

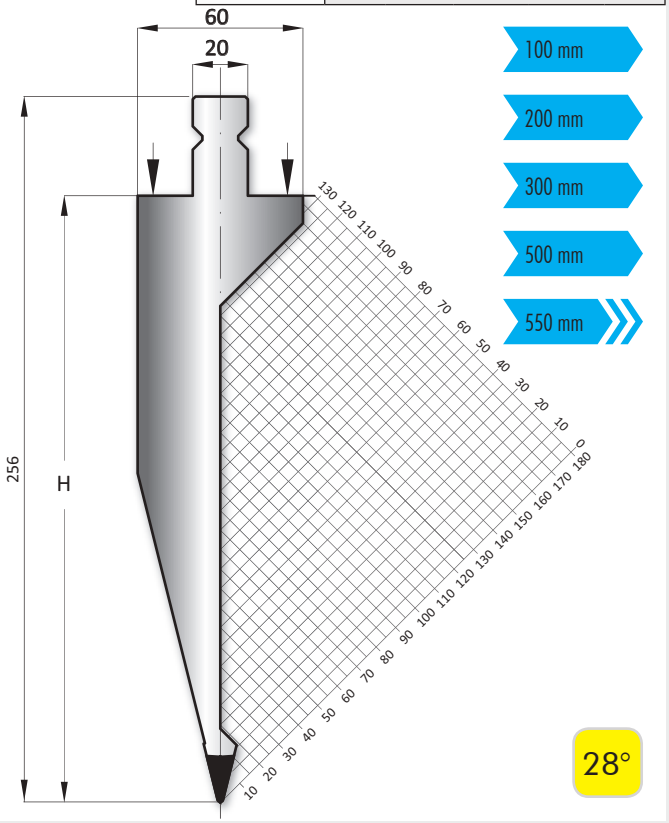
100 mm
200 mm
300 mm
500 mm
550 mm

	α	R	H	T/mt	Mt
15.320	28°	1.00	120.00	80	III
15.320 X	Simple Clamp				



28°

	α	R	H	T/mt	Mt
15.720	28°	1.00	220.00	80	III
15.720 X	Simple Clamp (außer/not 300 u. 500)				

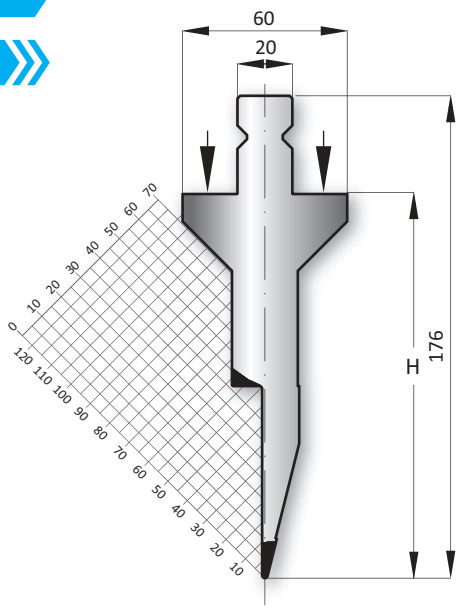


100 mm
200 mm
300 mm
500 mm
550 mm

28°

100 mm
200 mm
300 mm
500 mm
550 mm

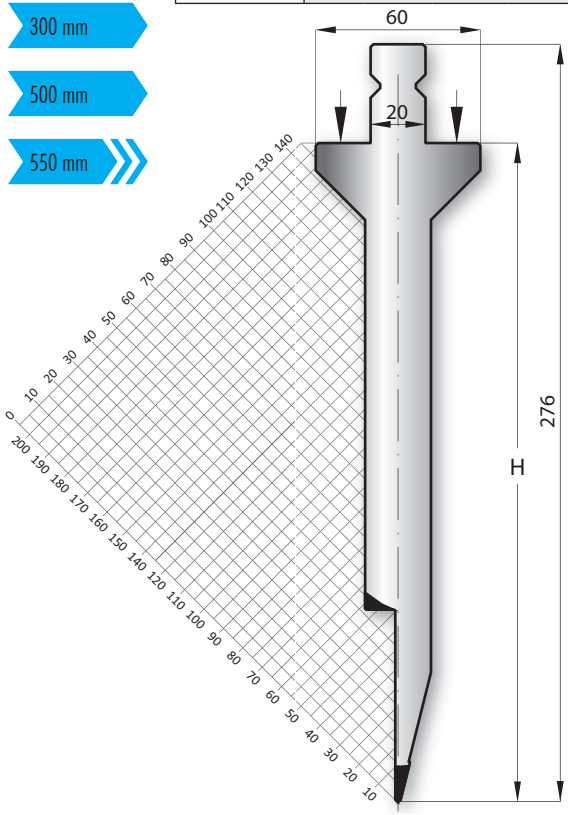
	α	R	H	T/mt	Mt
15.450	28°	1.00	140.00	40	III
15.450 X	Simple Clamp (außer/not 500)				



28°

100 mm
200 mm
300 mm
500 mm
550 mm

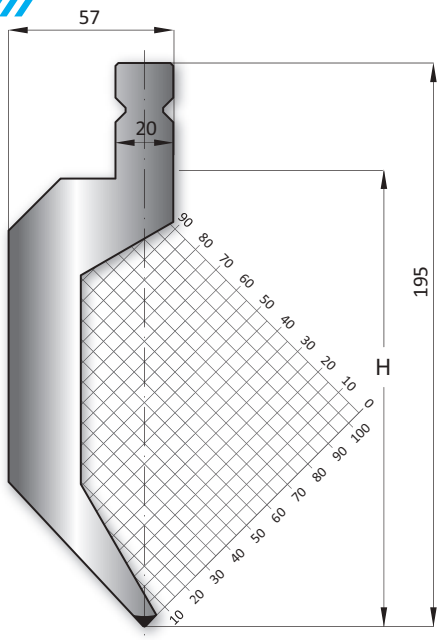
	α	R	H	T/mt	Mt
15.750	28°	1.00	240.00	40	III
15.750 X	Simple Clamp (außer/not 300 u. 500)				



28°

100 mm
200 mm
300 mm
500 mm
550 mm

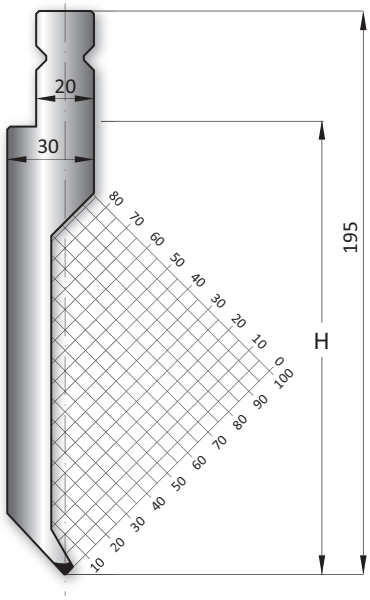
	α	R	H	T/mt	Mt
15.670	86°	0.80	158.00	40	III
15.670 X	Simple Clamp (außer/not 500)				



86°

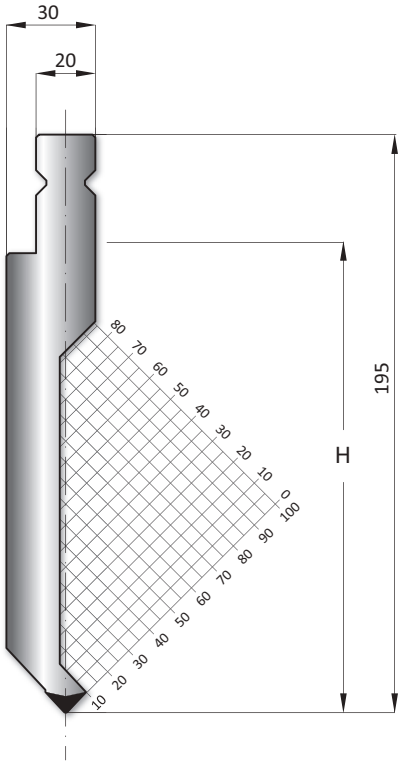
100 mm
200 mm
300 mm
500 mm
550 mm

	α	R	H	T/mt	Mt
15.635	86°	0.60	158.00	30	III
15.635 X	Simple Clamp (außer/not 500)				



86°

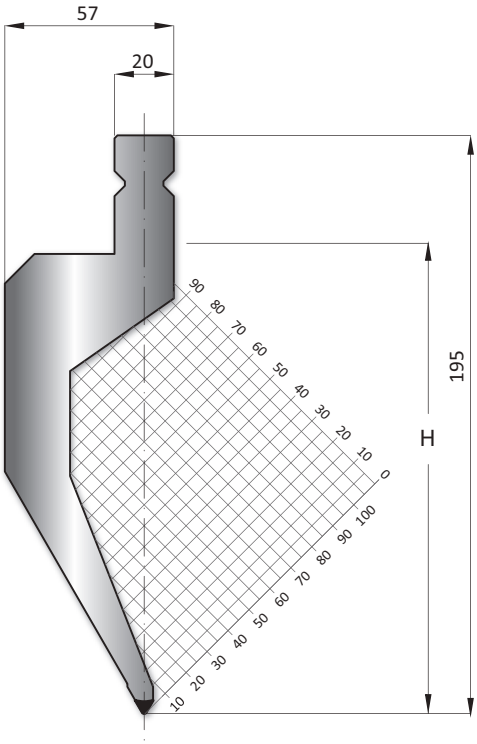
	α	R	H	T/mt	Mt
15.630	86°	0.80	158.00	80	III
15.630 X	Simple Clamp (außer/not 500)				



100 mm
200 mm
300 mm
500 mm
550 mm

86°

	α	R	H	T/mt	Mt
15.680	60°	0.80	158.00	40	III
15.680 X	Simple Clamp (außer/not 500)				

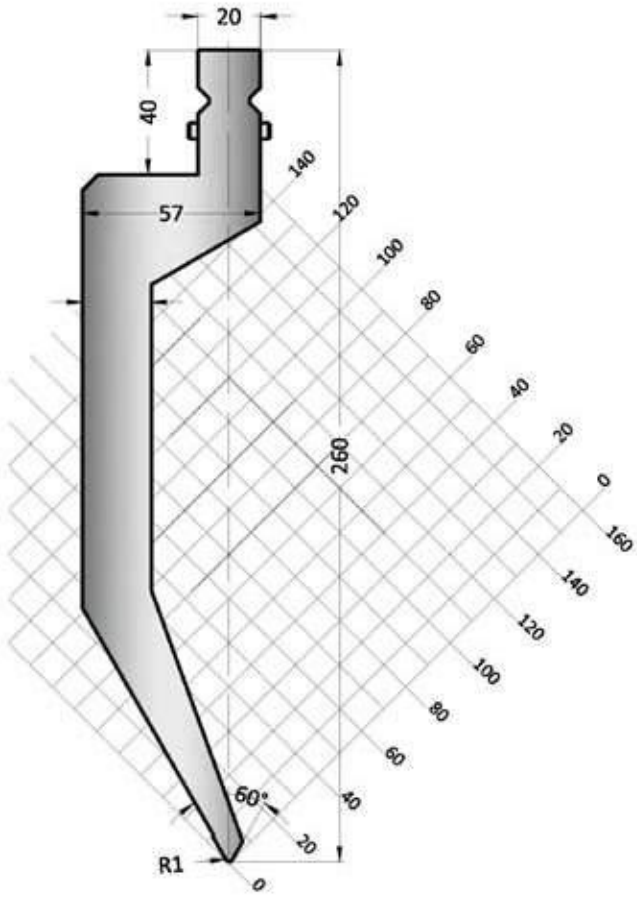


100 mm
200 mm
300 mm
500 mm
550 mm

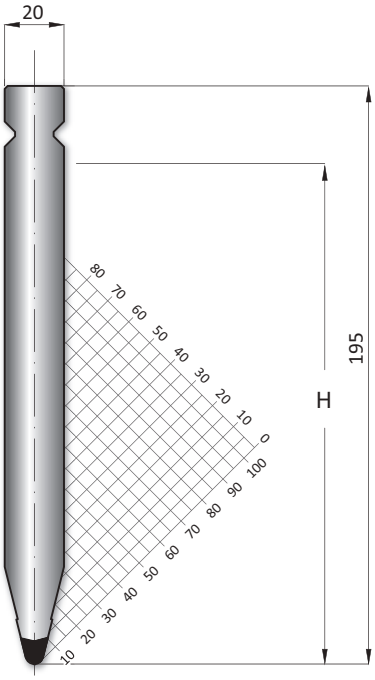
60°

1.08.182

Westermann24 entwickelt für Sie die richtige Werkzeugform für Ihr Produkt. (S. 161)



	α	R	H	T/mt	Mt
15.610	28°	3.00	158.00	100	III
15.610 X	Simple Clamp (außer/not 500)				



100 mm

200 mm

300 mm

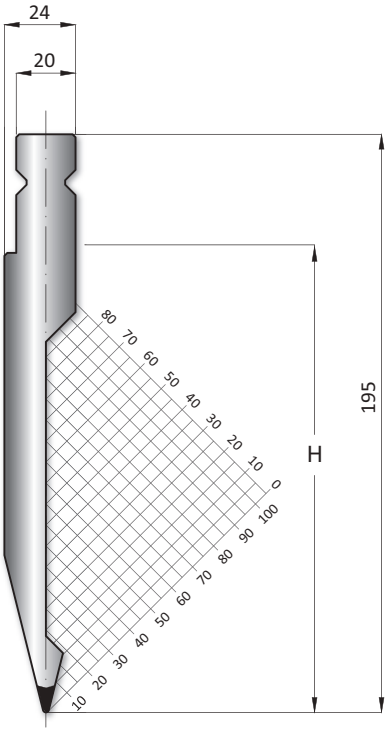
500 mm

550 mm

28°

Green Line

	α	R	H	T/mt	Mt
15.620	28°	1.00	158.00	80	III
15.620 X	Simple Clamp				



100 mm

200 mm

300 mm

500 mm

550 mm

28°

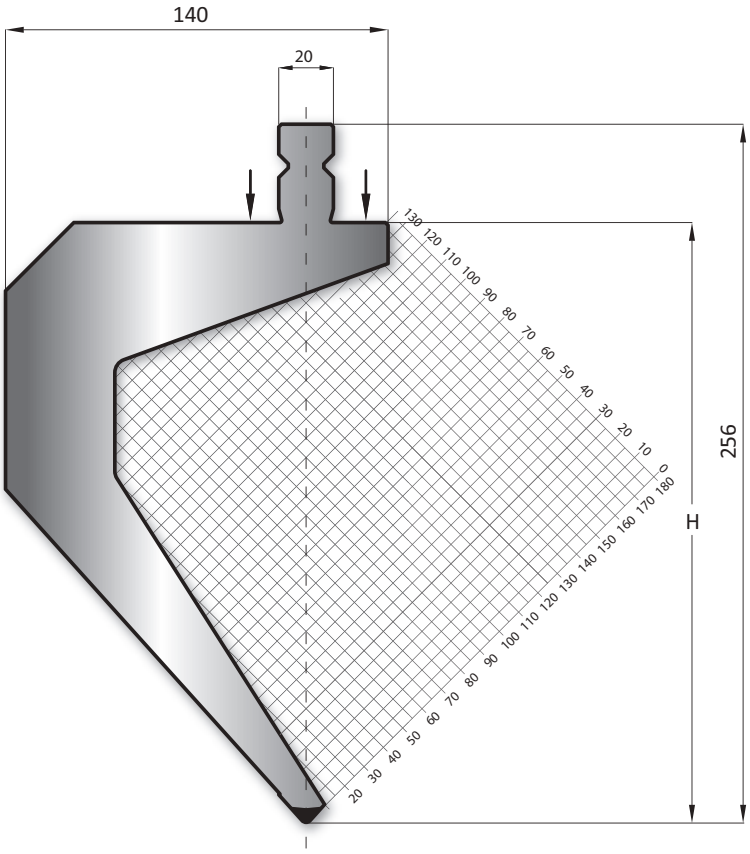
100 mm

200 mm

550 mm

Green Line

	α	R	H	T/mt	Mt
15.790	84°	1.00	220.00	60	III



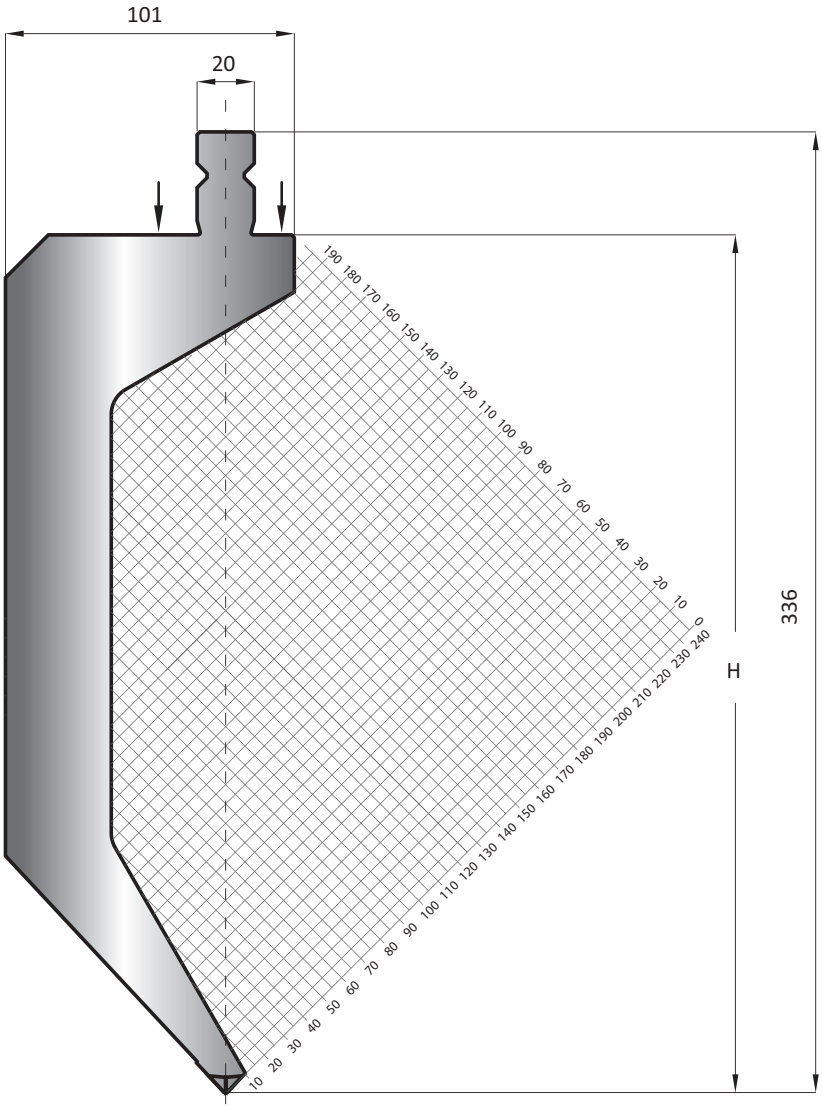
84°

100 mm

200 mm

550 mm

	α	R	H	T/mt	Mt
15.800	86°	1.00	300.00	40	III
15.800 X	Simple Clamp (außer/not 200)				



86°

	H	Mt
15.760	120.00	III
15.760 X	Simple Clamp (außer/not 500)	

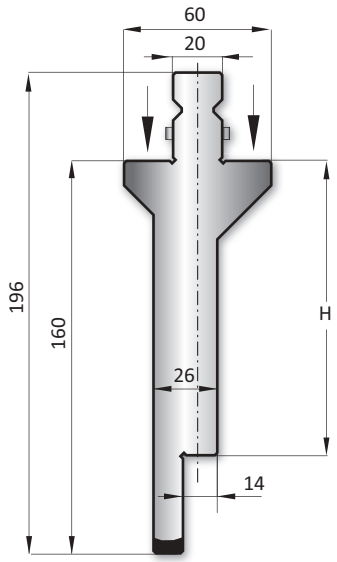
100 mm

200 mm

300 mm

500 mm

550 mm

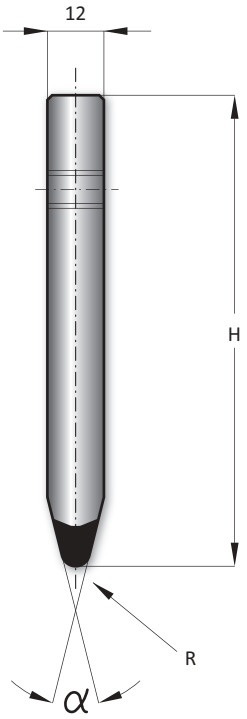


100 mm

500 mm

550 mm

	α	R	H	T/mt	Mt
15.776	86°	1.00	100	100	III
15.774	84°	1.00	100	100	III
15.769	28°	6.00	100	100	III
15.768	28°	5.00	100	100	III
15.767	28°	4.00	100	100	III
15.766	28°	3.00	100	100	III
15.765	28°	2.00	100	100	III
15.763	28°	1.00	100	100	III
15.761	28°	0.50	100	100	III



86°

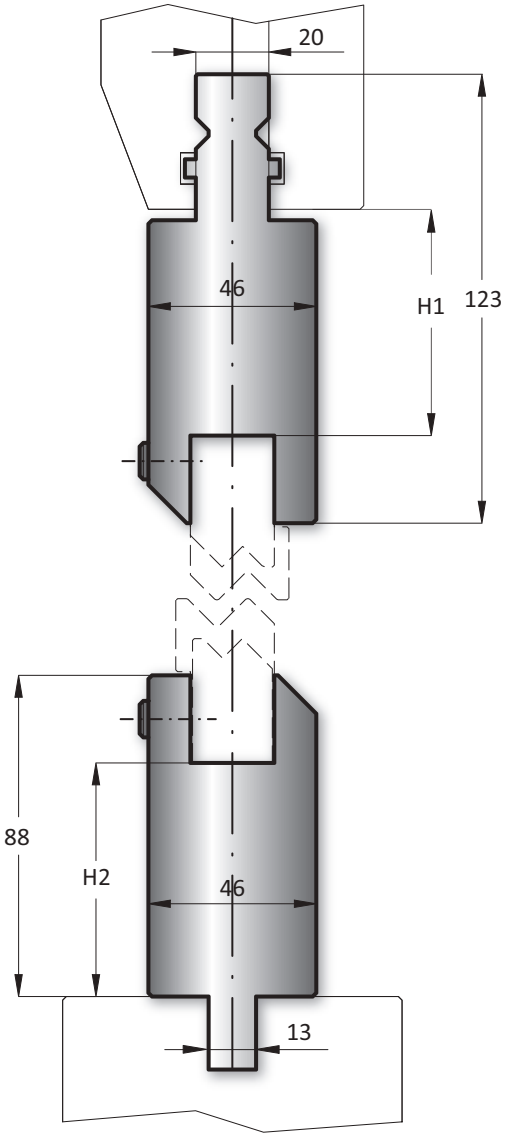
84°

28°

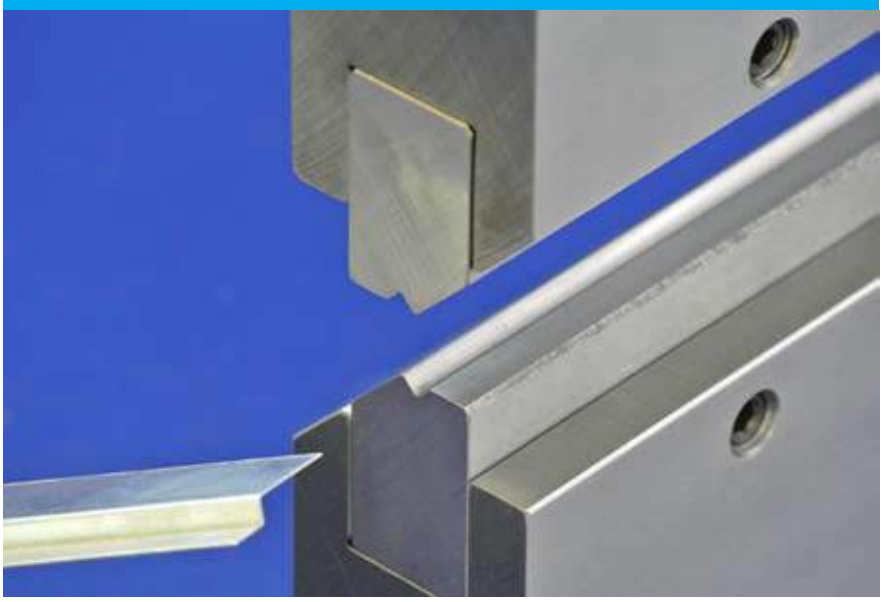
	H1	H2	T/mt	Mt
15.050	62	64	100	I

415 mm

835 mm



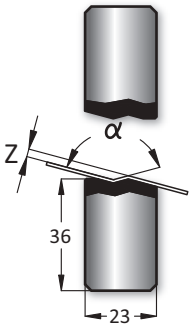
Montagebeispiel - Assembly Scheme



415 mm

835 mm

	Z	α	T/mt	Mt
40.510	1.00	160°	100	I
40.515	1.50	160°	100	I
40.520	2.00	150°	100	I
40.525	2.50	140°	100	I



160°

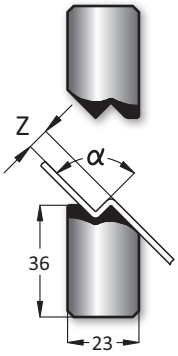
150°

140°

415 mm

835 mm

	Z	α	T/mt	Mt
40.511	1.00	90°	100	I
40.516	1.50	90°	100	I
40.521	2.00	90°	100	I
40.526	2.50	90°	100	I
40.530	3.00	90°	100	I
40.535	3.50	90°	100	I
40.540	4.00	90°	100	I
40.545	4.50	90°	100	I
40.550	5.00	90°	100	I
40.555	5.50	90°	100	I
40.560	6.00	90°	100	I
40.565	6.50	90°	100	I
40.570	7.00	90°	100	I
40.575	7.50	90°	100	I
40.580	8.00	90°	100	I

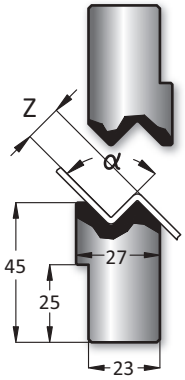


90°

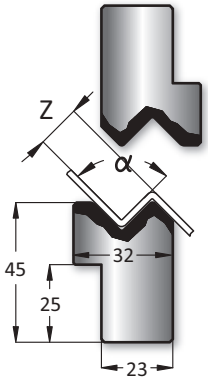
415 mm

835 mm

	Z	α	T/mt	Mt
40.590	9.00	90°	100	I
40.610	10.00	90°	100	I
40.611	11.00	90°	100	I
40.612	12.00	90°	100	I



90°

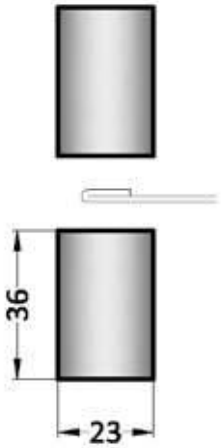


	Z	α	T/mt	Mt
40.613	13.00	90°	100	I
40.614	14.00	90°	100	I
40.615	15.00	90°	100	I

415 mm

835 mm

90°



	Z	α	T/mt	Mt
40.500				I

415 mm

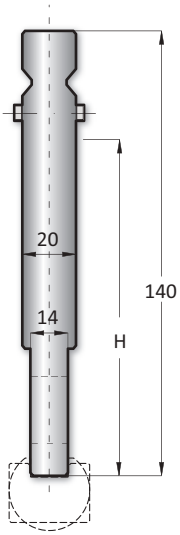
835 mm

90°

	H	T/mt	Mt
15.010	103.00	80	I
15.010 X	Simple Clamp (außer/not 830)		

412 mm

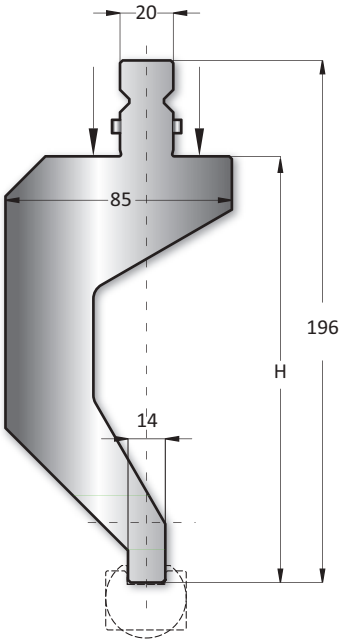
830 mm



	H	T/mt	Mt
15.014	160.00	80	I

412 mm

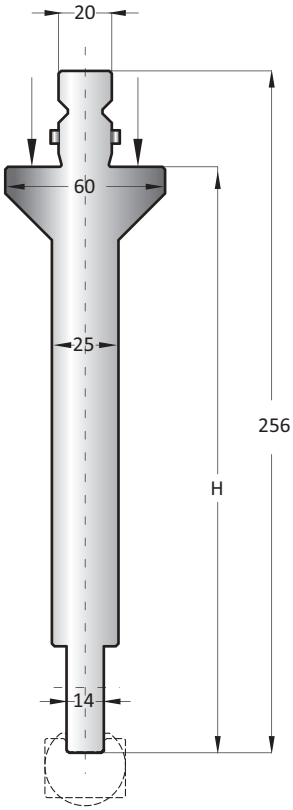
830 mm



	H	T/mt	Mt
15.018	220.00	80	I

412 mm

830 mm

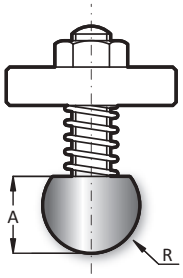


Green Line

415 mm

835 mm

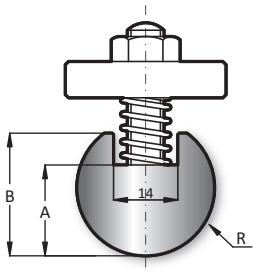
	R	A
10.300	7.00	11.50
10.301	7.50	11.50
10.302	8.00	13.00
10.303	9.00	16.00
10.304	10.00	16.00
10.305	11.00	16.00
10.306	11.50	19.00
10.307	12.00	20.00



415 mm

835 mm

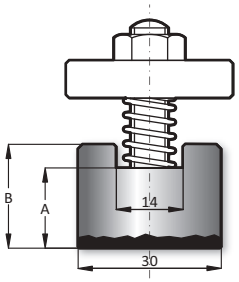
	R	A	B
10.308	12.50	16.00	21.00
10.309	13.00	17.00	23.00
10.310	14.00	19.00	25.00
10.311	15.00	20.00	27.00
10.312	16.00	21.00	28.00
10.313	17.00	21.50	31.50
10.314	17.50	22.00	32.00
10.315	19.00	25.00	32.00
10.316	20.00	24.00	34.00
10.317	22.50	25.00	33.00
10.318	25.00	29.00	39.00
10.319	27.50	34.00	44.00
10.320	30.00	34.00	44.00
10.321	35.00	45.00	55.00
10.322	40.00	45.00	55.00
10.323	45.00	50.00	60.00
10.324	50.00	54.00	64.00



415 mm

835 mm

	A	B
10.325	17.00	22.00

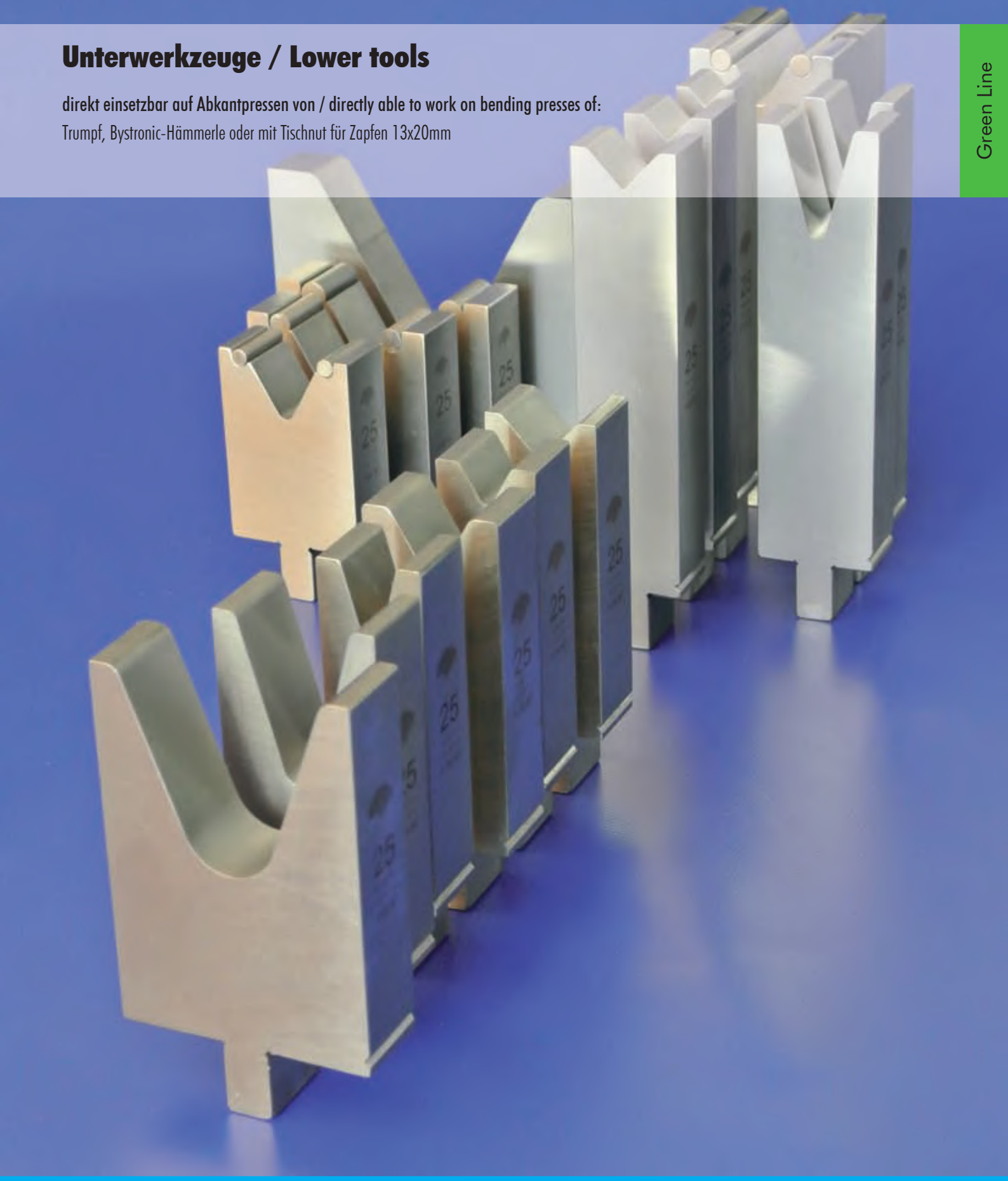


Westermann24 liefert Ihnen Lösungen für Halter mit Einsatz.
(S. 163)

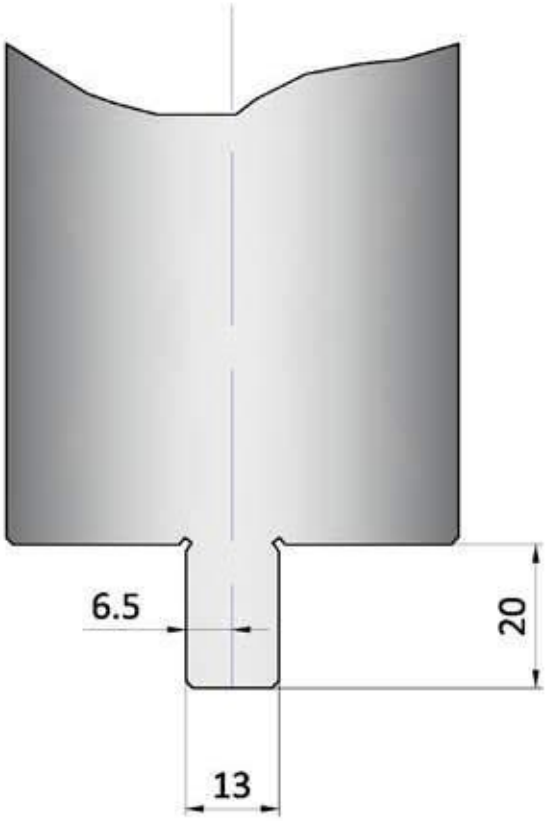
Unterwerkzeuge / Lower tools

direkt einsetzbar auf Abkantpressen von / directly able to work on bending presses of:

Trumpf, Bystronic-Hämmerle oder mit Tischnut für Zapfen 13x20mm



Green Line



direkt einsetzbar auf Abkantpressen von:
Trumpf, Bystronic-Hämmerle, oder mit Tischnut
für Zapfen 13x20mm

directly able to work on bending presses of:
Trumpf, Bystronic-Hämmerle, or with table
anchoring slots for pivots 13x20mm

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Unterwerkzeuge:
UW 550mm sektioniert in: 25,25,30,35,40,45,50,100,200

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden.
(siehe Seite 161)

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

design:
All radii are grinded and hardened

length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

tool sets divided into sections:
Lower tool:
UW 550mm sectioned in: 25,25,30,35,40,45,50,100,200

loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

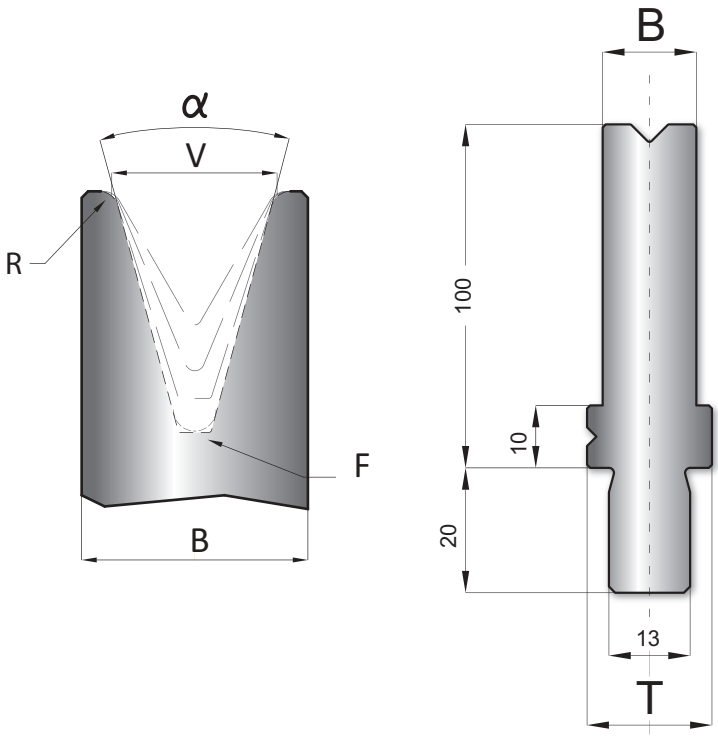
H=100

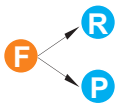
H=120

100 mm

500 mm

550 mm





86°	V	R	H	B	T	F	T/mt	Mt
25.100	4	0,6	100	8	20	R 0,6	100	I
25.101	6	0,6	100	20	20	R 0,6	100	I
25.102	8	0,8	100	20	20	R 0,8	100	I
25.103	10	1,0	100	20	20	R 1,0	100	I
25.104	12	1,0	100	35	25	R 1,0	100	I
25.105	16	1,6	100	30	30	R 1,6	100	I
25.106	20	2,0	100	30	30	R 2,0	100	I

84°	V	R	H	B	T	F	T/mt	Mt
25.201	6	0,6	100	20	20	R 0,6	100	I
25.202	8	0,8	100	20	20	R 0,8	100	I
25.203	10	1,0	100	20	20	R 1,0	100	I
25.204	12	1,0	100	25	25	R 1,0	100	I
25.205	16	1,6	100	30	30	R 1,6	100	I
25.206	20	2,0	100	30	30	R 2,0	100	I

80°	V	R	H	B	T	F	T/mt	Mt
25.207	24	2,5	100	35	35	R 2,5	100	I
25.208	30	5,0	100	45	45	R 3,0	100	I
25.209	40	5,0	100	55	55	R 3,0	100	I
25.210	50	5,0	100	65	65	R 5,0	100	I
25.111	60	5,0	100	75	75	R 5,0	100	I
25.112	70	5,0	100	85	85	R 5,0	100	I
25.113	80	5,0	100	100	100	R 5,0	100	I
25.114	90	8,0	120	110	110	R 5,0	100	I
25.115	100	8,0	120	120	120	R 5,0	100	I
2.11.164	120							

60°	V	R	H	B	T	F	T/mt	Mt
2.11.144	16		100					
2.11.145	20		100					
2.11.146	24		100					
2.11.147	30		100					
2.11.148	35		100					
2.11.149	40		100					
2.11.150	50		100					
2.11.151	60		100					
2.11.152	80		100					
2.11.153	100		100					
25.116	120	8,0	120	145	145	P 38	100	I

86°

84°

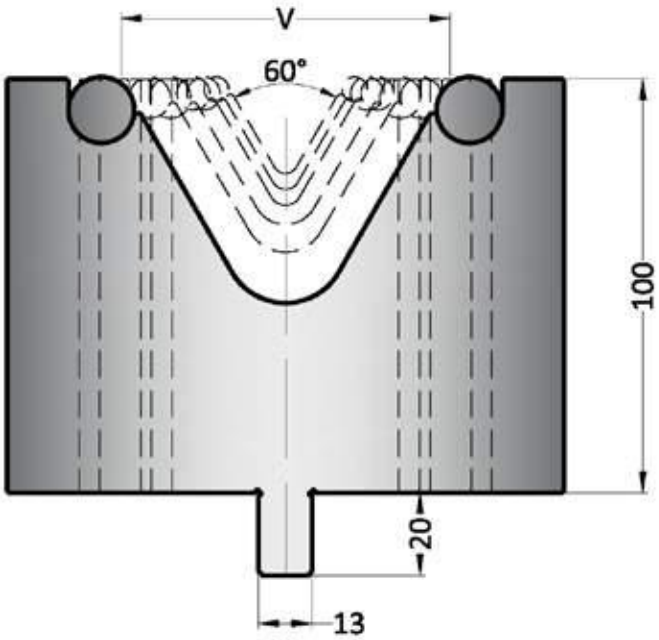
80°

60°

Legende - Legend	Technik - technique
F = Nutgrund - ground of the groove	
R = radius	
P = flach - flat	

30°	V	R	H	B	T	F	T/mt	Mt
25.400	4	0,6	100	15	20	R 0,6	20	III
25.401	6	0,6	100	20	20	R 0,6	40	III
25.421	6	3,0	100	20	20	R 0,6	40	III
25.402	8	1,0	100	20	20	R 1,0	40	III
25.422	8	3,0	100	20	20	R 1,0	40	III
25.403	10	1,0	100	20	20	R 1,0	40	III
25.423	10	3,0	100	20	20	R 1,0	40	III
25.404	12	1,0	100	25	25	R 1,0	40	III
25.424	12	3,0	100	25	25	R 1,0	40	III
25.405	16	1,6	100	30	30	R 1,6	50	III
25.425	16	3,0	100	30	30	R 1,6	50	III
25.406	20	2,0	100	35	35	R 2,0	60	III
25.407	24	2,5	100	40	40	R 2,5	65	III
25.408	30	3,0	100	55	55	R 3,0	90	III
25.409	40	5,0	100	60	60	R 5,0	90	III
2.22.141	30							
2.11.142	35							
2.11.143	40							

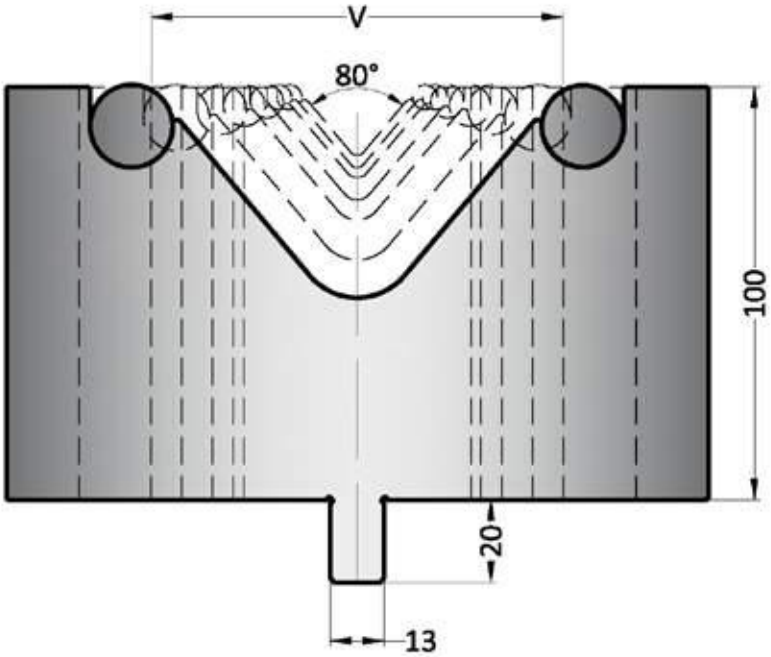
30°



	V	α	H
2.20.011	30	60°	100.00
2.20.012	35	60°	100.00
2.20.013	40	60°	100.00
2.20.014	50	60°	100.00
2.20.015	60	60°	100.00
2.20.016	80	60°	100.00

Westermann-Steckmatrize - mit Einlaufwellen 60°

60°



	V	α	H
2.20.017	30	80°	100.00
2.20.018	35	80°	100.00
2.20.019	40	80°	100.00
2.20.020	50	80°	100.00
2.20.021	60	80°	100.00
2.20.022	80	80°	100.00

Westermann 24 liefert Ihnen Matrizen mit Welleneinsatz.
(S. 162)

Westermann-Steckmatrize - mit Einlaufwellen 80°

80°

F R P

H=150

100 mm

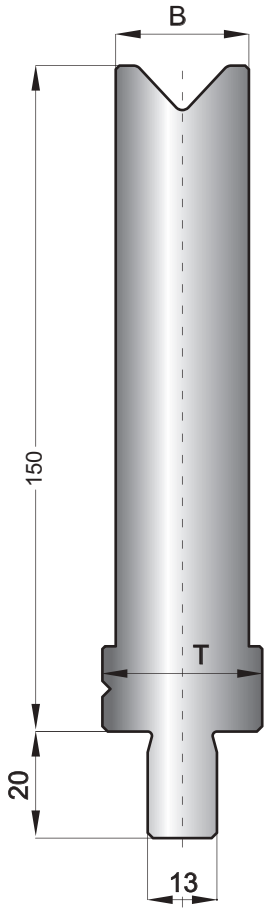
500 mm

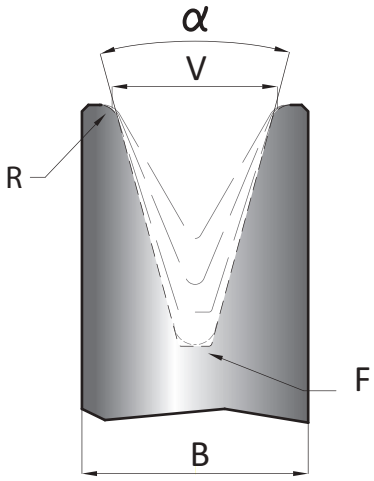
550 mm

86°	V	R	B	T	F	T/mt	Mt
25.601	6	0,6	20	20	R 0,6	100	I
25.602	8	0,8	20	20	R 0,8	100	I
25.603	10	1,0	20	20	R 1,0	100	I
25.604	12	1,0	25	25	R 1,0	100	I
25.605	16	1,6	30	30	R 1,6	100	I
25.606	20	2,0	30	30	R 2,0	100	I

84°	V	R	B	T	F	T/mt	Mt
25.621	6	0,6	20	20	R 0,6	100	I
25.622	8	0,8	20	20	R 0,8	100	I
25.623	10	1,0	20	20	R 1,0	100	I
25.624	12	1,0	25	25	R 1,0	100	I
25.625	16	1,6	30	30	R 1,6	100	I
25.626	20	2,0	30	30	R 2,0	100	I

80°	V	R	B	T	F	T/mt	Mt
25.627	24	2,5	35	35	R 2,5	100	I
25.628	30	5,0	45	45	R 3,0	100	I
25.629	40	5,0	55	55	R 3,0	100	I
25.630	50	5,0	65	65	R 5,0	100	I
2.12.182	60						
2.12.183	80						
2.12.184	100						
2.12.185	120						

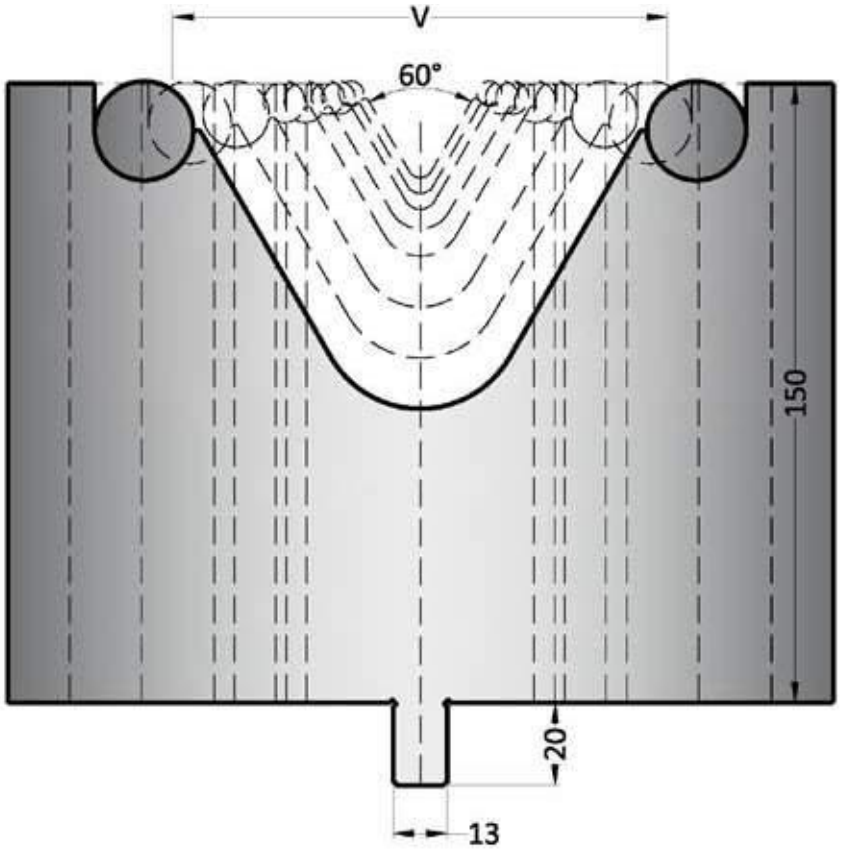




Legende - Legend	Technik - technique
F = Nutgrund - ground of the groove	
R = radius	
P = flach - flat	

60°	V	H
2.12.164	16	150.00
2.12.165	20	150.00
2.12.166	24	150.00
2.12.167	30	150.00
2.12.168	35	150.00
2.12.169	40	150.00
2.12.170	50	150.00
2.12.171	60	150.00
2.12.172	80	150.00
2.12.173	100	150.00
2.12.174	120	150.00

30°	V	R	B	T	F	T/mt	Mt
25.901	6	0,6	20	20	R 0,6	30	III
25.902	8	1,0	20	20	R 1,0	40	III
25.903	10	1,0	20	20	R 1,0	40	III
25.904	12	1,0	25	25	R 1,0	40	III
25.905	16	1,6	30	30	R 1,6	50	III
25.906	20	2,0	35	35	R 2,0	60	III
25.907	24	2,5	40	40	R 2,5	65	III
25.908	30	3,0	55	55	R 3,0	90	III
25.909	40	5,0	60	60	R 5,0	90	III

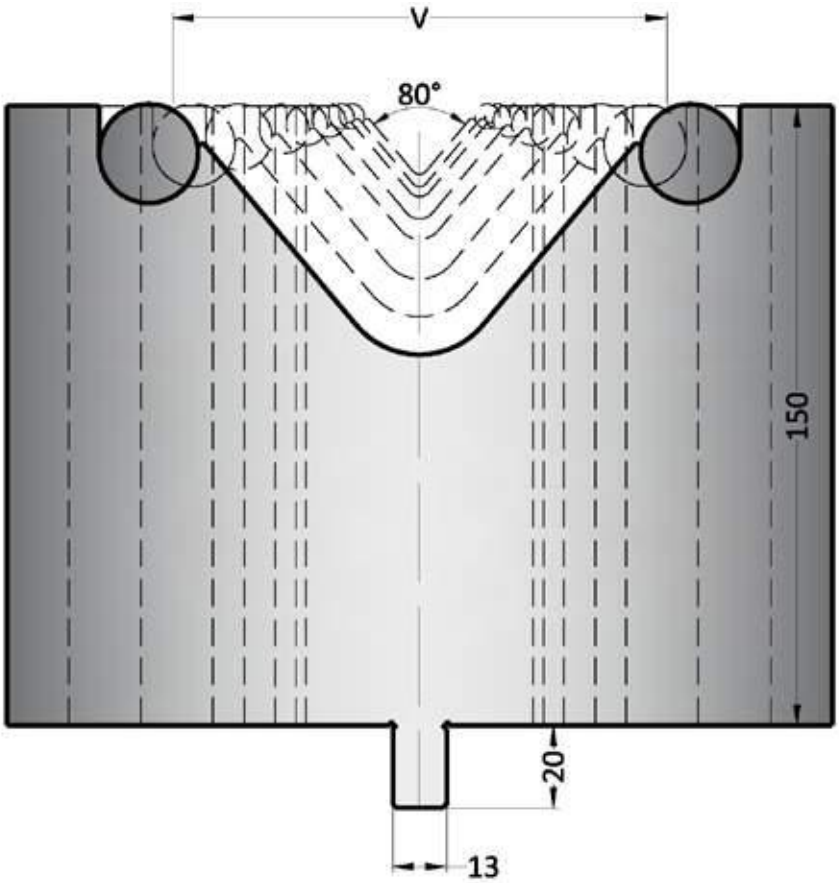


Westermann-Steckmatrize - mit Einlaufwellen 60°

	V	α	H
2.21.004	30	60°	150.00
2.21.005	35	60°	150.00
2.21.006	40	60°	150.00
2.21.007	50	60°	150.00
2.21.008	60	60°	150.00
2.21.009	80	60°	150.00
2.21.010	100	60°	150.00
2.21.011	120	60°	150.00

Westermann 24 liefert Ihnen Matrizen mit Welleneinsatz.
(S. 162)

60°



Westermann-Steckmatrize - mit Einlaufwellen 80°

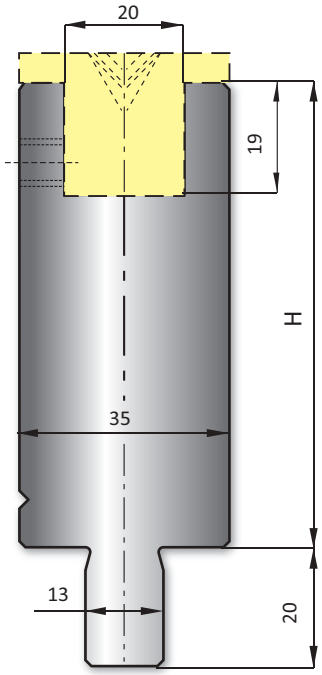
	V	α	H
2.21.017	30	80°	150.00
2.21.018	35	80°	150.00
2.21.019	40	80°	150.00
2.21.020	50	80°	150.00
2.21.021	60	80°	150.00
2.21.022	80	80°	150.00
2.21.023	100	80°	150.00
2.21.024	120	80°	150.00

80°

	H	Mt
22.005	95,00	I

415 mm

835 mm



Weitere Möglichkeiten für abdruckfreies Kanten (ab S. 177)

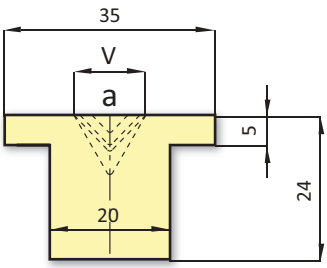
Mittel

415 mm

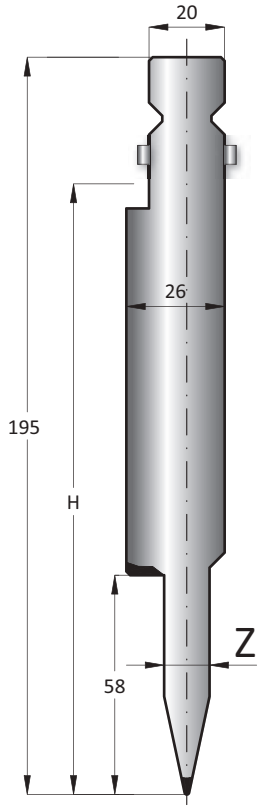
835 mm

	V	α
32.306	**6**	30°
32.308	**8**	30°
32.310	**10**	30°
32.406	**6**	45°
32.408	**8**	45°
32.410	**10**	45°
32.412	**12**	45°
32.606	**6**	60°
32.608	**8**	60°

	V	α
32.610	**10**	60°
32.612	**12**	60°
32.616	**16**	60°
32.806	**6**	88°
32.808	**8**	88°
32.810	**10**	88°
32.812	**12**	88°
32.816	**16**	88°



20 T/mt

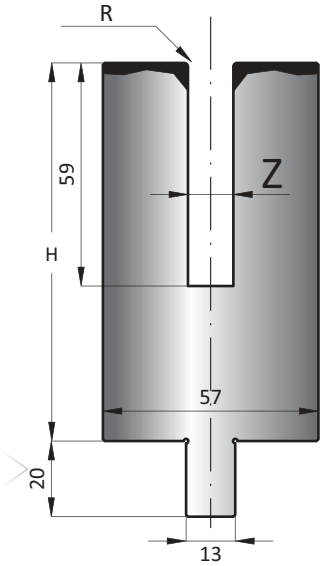


	α	R	H	Z	T/mt	Mt
15.902	24°	0.60	158.00	8	80	II
15.904	24°	0.60	158.00	10	80	II
15.905	24°	0.60	158.00	12	80	II

500 mm

550 mm

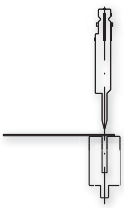
24°

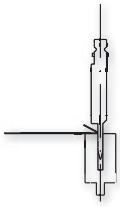


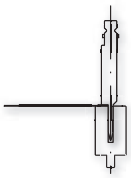
	R	H	Z	T/mt	Mt
25.992	1.00	100.00	8,2	50	II
25.994	1.00	100.00	10,2	50	II
25.995	1.00	100.00	12,2	50	II

500 mm

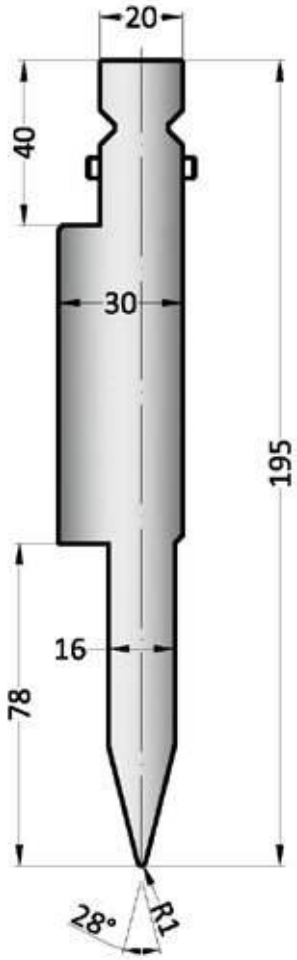
550 mm





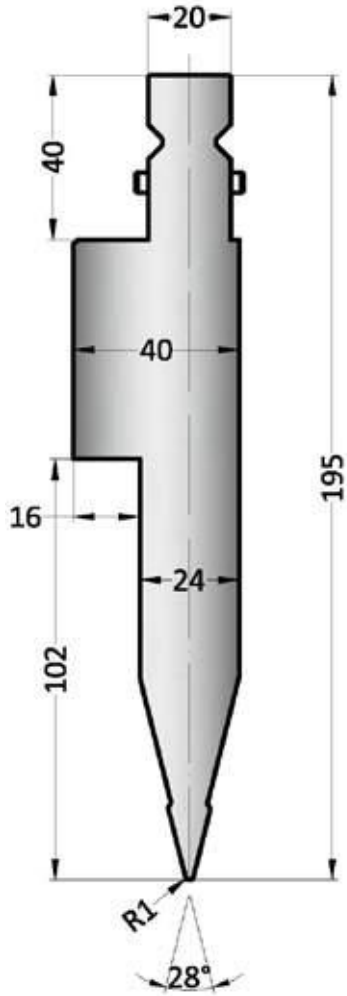


1.08.189



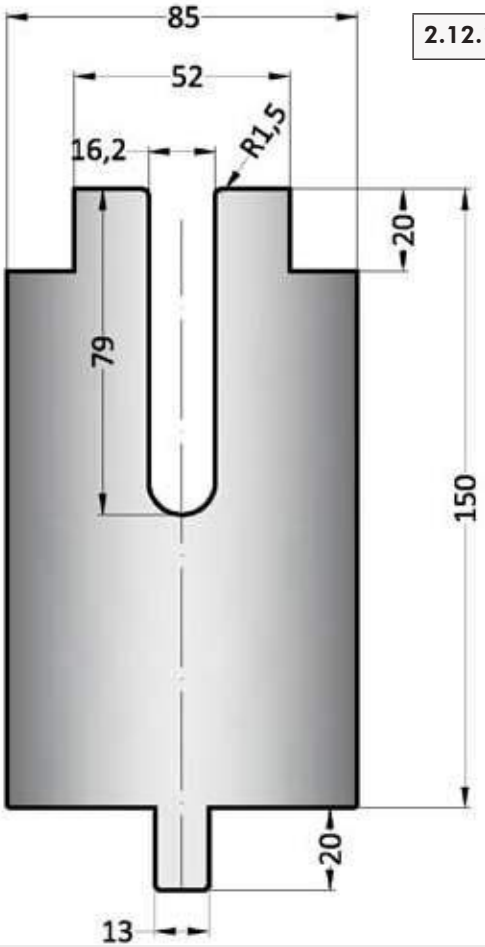
28°

1.08.190

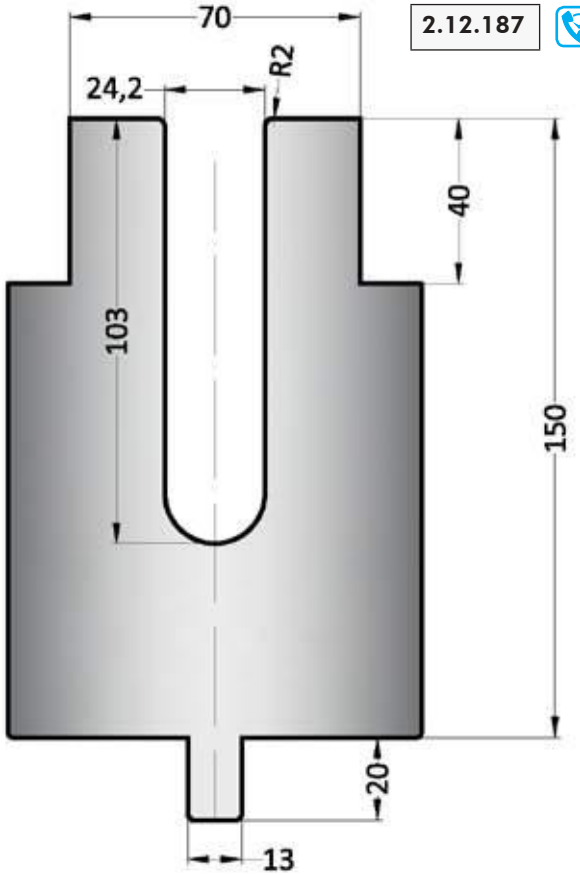


28°

2.12.186



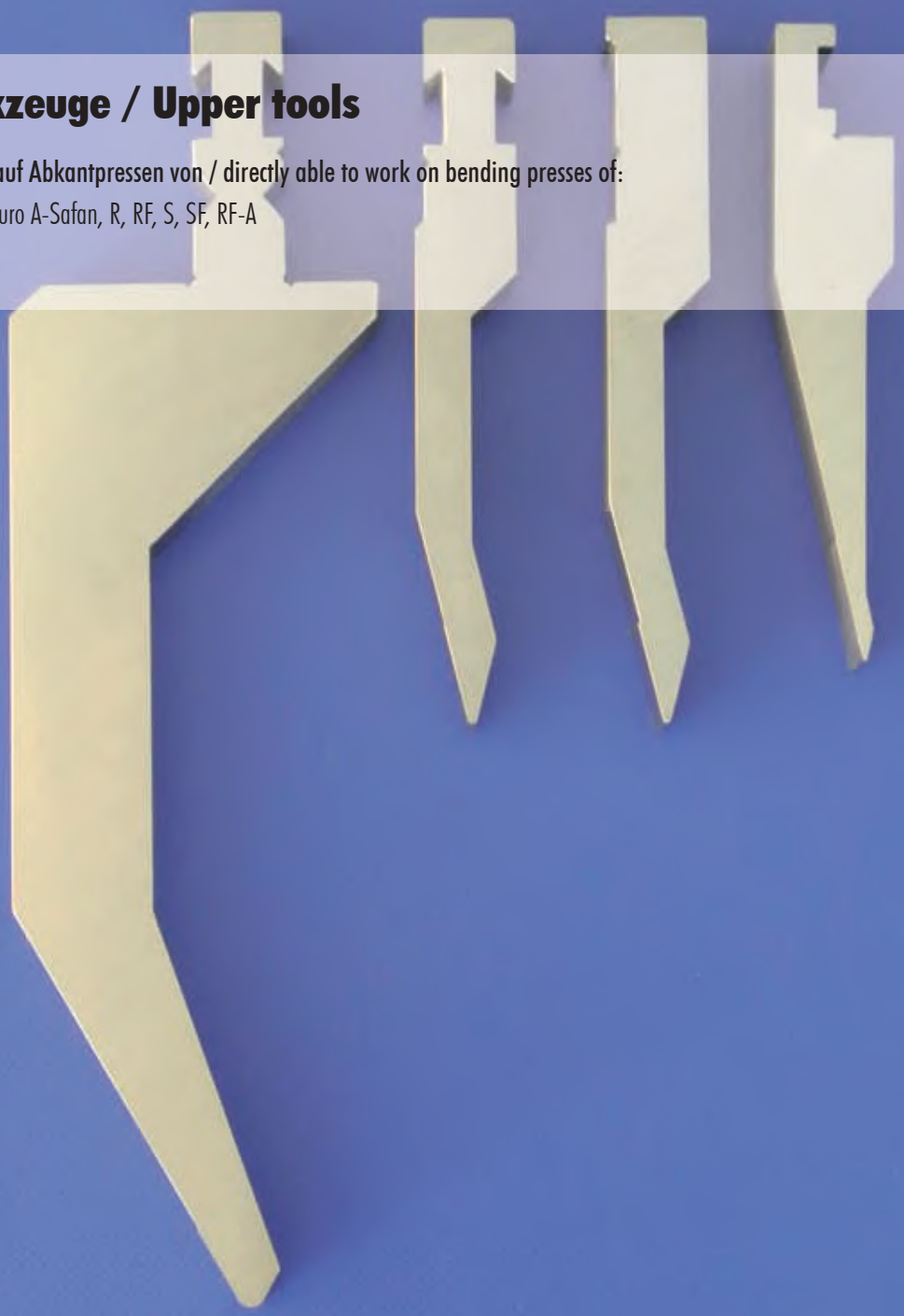
2.12.187



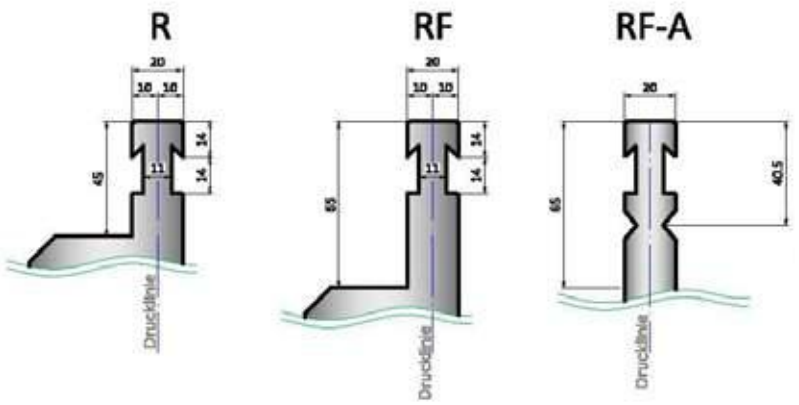
Oberwerkzeuge / Upper tools

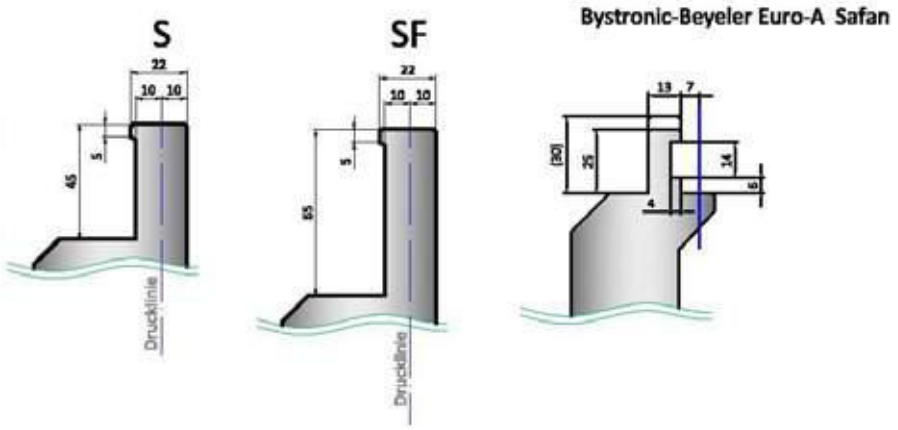
direkt einsetzbar auf Abkantpressen von / directly able to work on bending presses of:

Bystronic-Beyeler: Euro A-Safan, R, RF, S, SF, RF-A



Yellow Line





direkt einsetzbar auf Abkantpressen von:
Bystronic-Beyeler Euro A-Safan
Bystronic-Beyeler R
Bystronic-Beyeler RF
Bystronic-Beyeler S
Bystronic-Beyeler SF
Bystronic-Beyeler RF-A

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Oberwerkzeuge:
OW 1100mm sektioniert in : 10,15,20,30,40,50,60,75,100,200,300,100 Horn links, 100 Horn rechts

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden. (siehe Seite 161)

directly able to work on bending presses of:
Bystronic-Beyeler Euro A-Safan
Bystronic-Beyeler R
Bystronic-Beyeler RF
Bystronic-Beyeler S
Bystronic-Beyeler SF
Bystronic-Beyeler RF-A

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

design:
All radii are grinded and hardened

length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

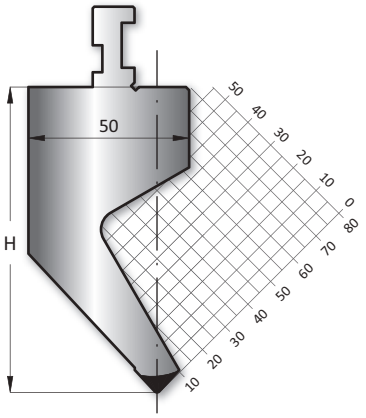
tool sets divided into sections:
Upper tool:
OW 1100mm sectioned in : 10,15,20,30,40,50,60,75,100,200,300,100 horn left, 100 horn right

loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

	α	R	H	T/mt	Mt
14.040	86°	1.00	95.00	75	II

500 mm

550 mm

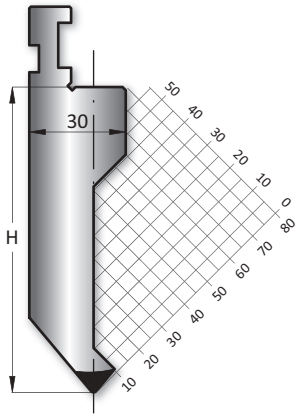


86°

	α	R	H	T/mt	Mt
14.020	80°	1.00	95.00	75	II

500 mm

550 mm

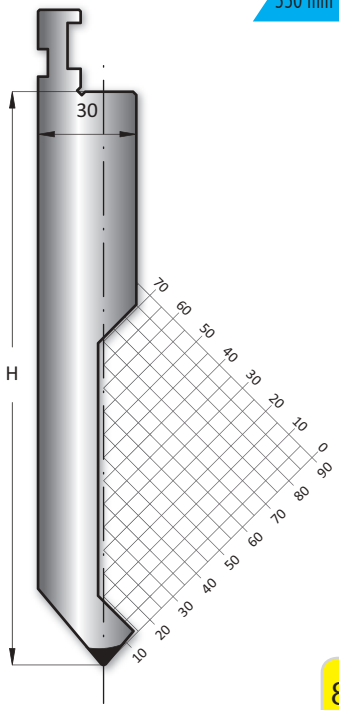


80°

	α	R	H	T/mt	Mt
14.060	80°	1.00	175.00	80	II

500 mm

550 mm

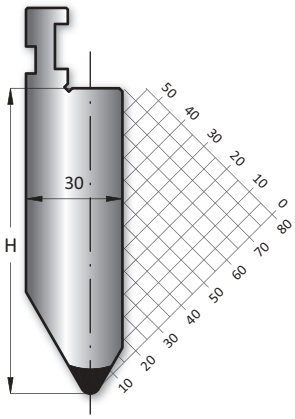


80°

	α	R	H	T/mt	Mt
14.010	60°	3.00	95.00	100	II

500 mm

550 mm

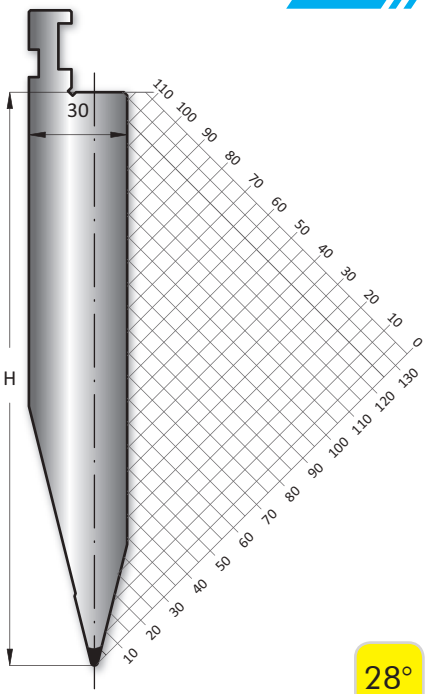


60°

	α	R	H	T/mt	Mt
14.050	28°	1.00	175.00	100	II

500 mm

550 mm



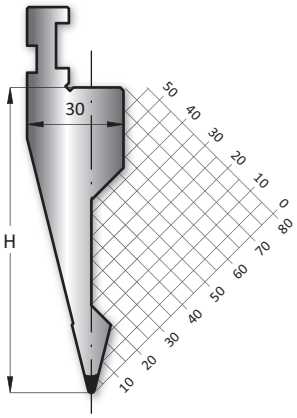
28°

	α	R	H	T/mt	Mt
14.030	28°	1.00	95.00	70	II

500 mm

550 mm

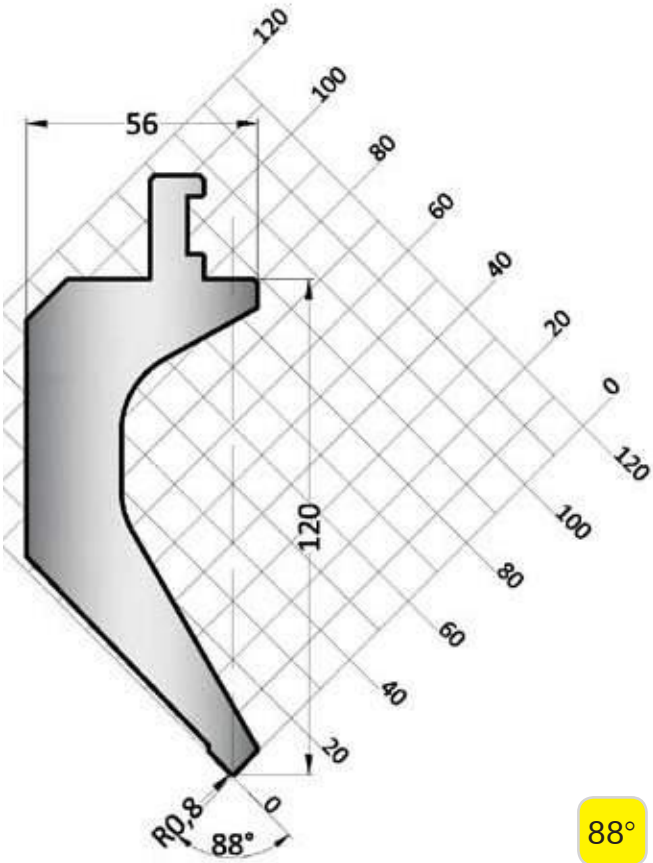
Westermann24 entwickelt für Sie die richtige Werkzeugform für Ihr Produkt. (S. 161)



28°

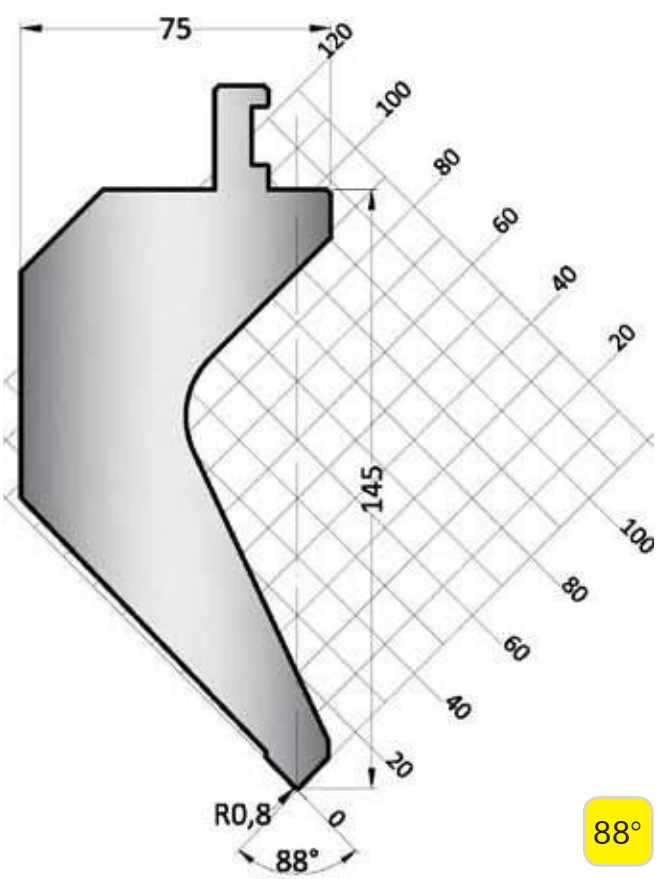
Yellow Line

1.02.070



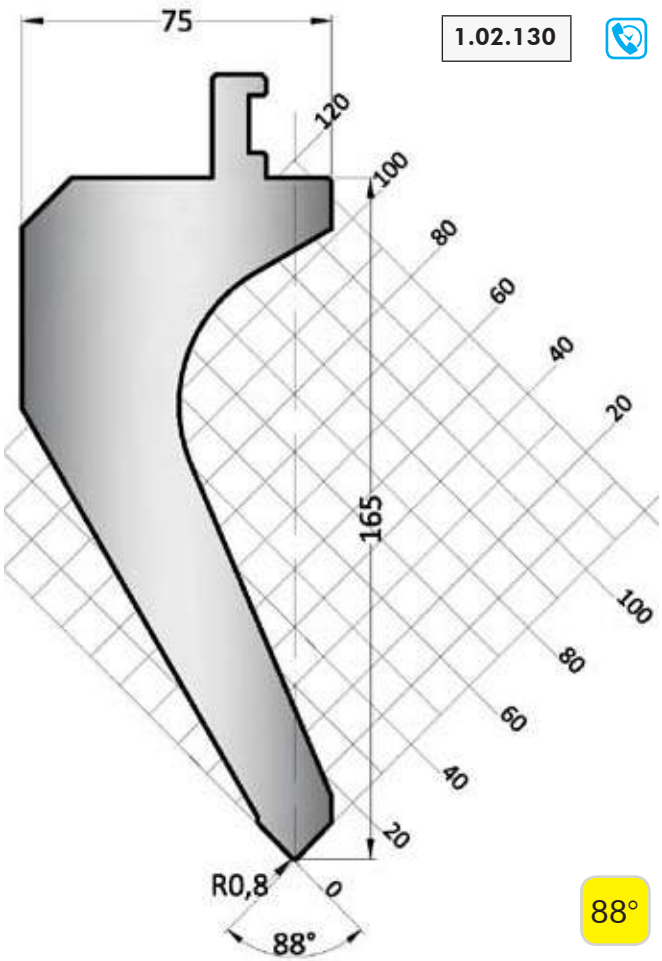
88°

1.02.100



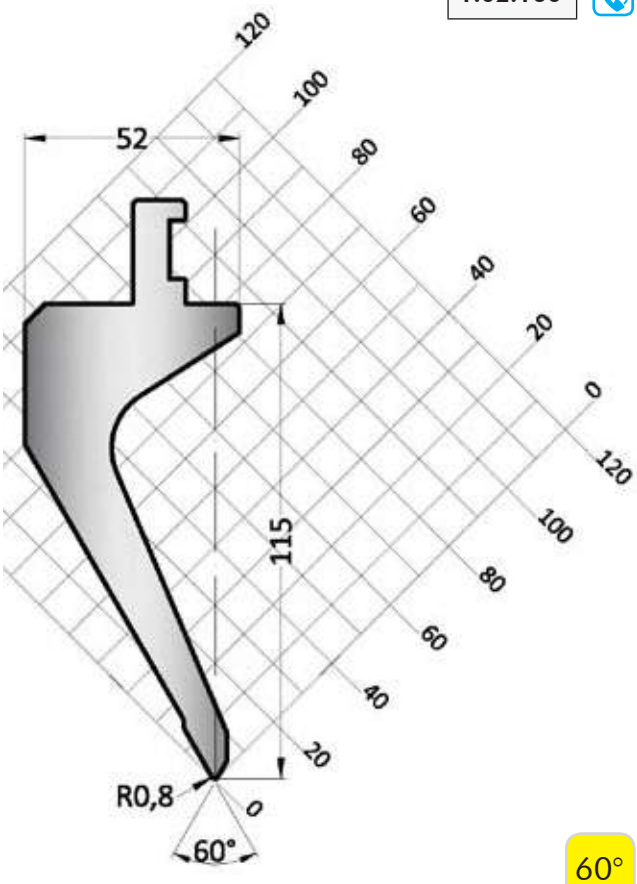
88°

1.02.130



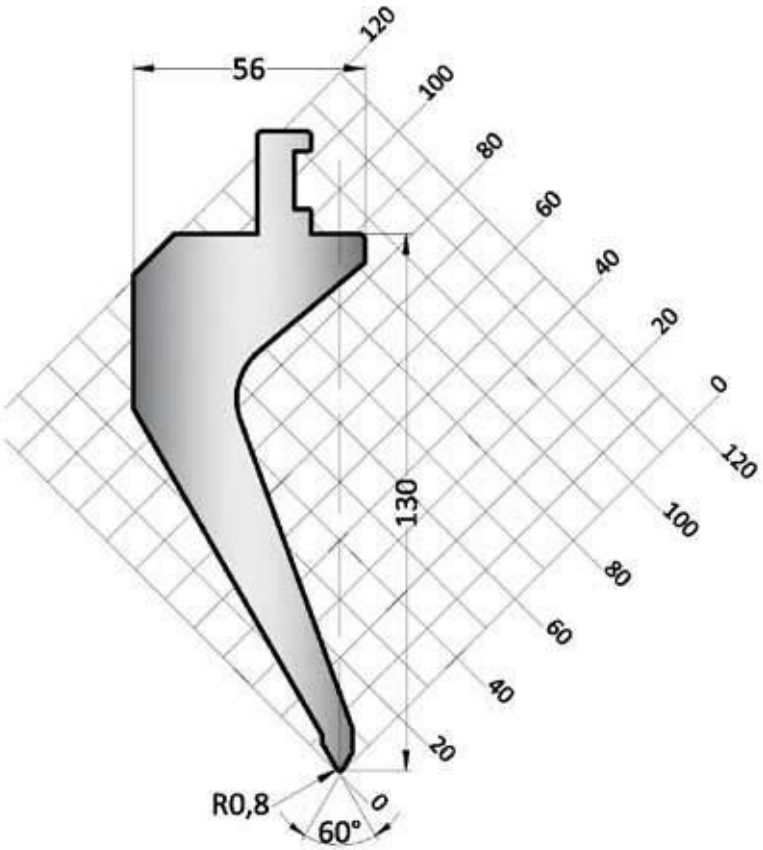
88°

1.02.160



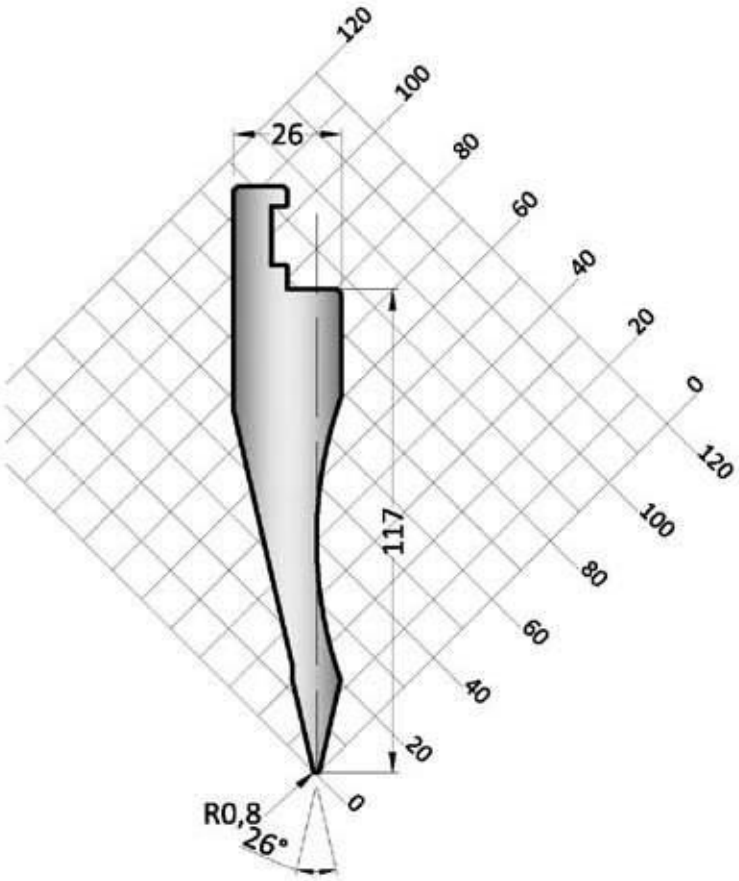
60°

1.02.190



60°

1.02.220

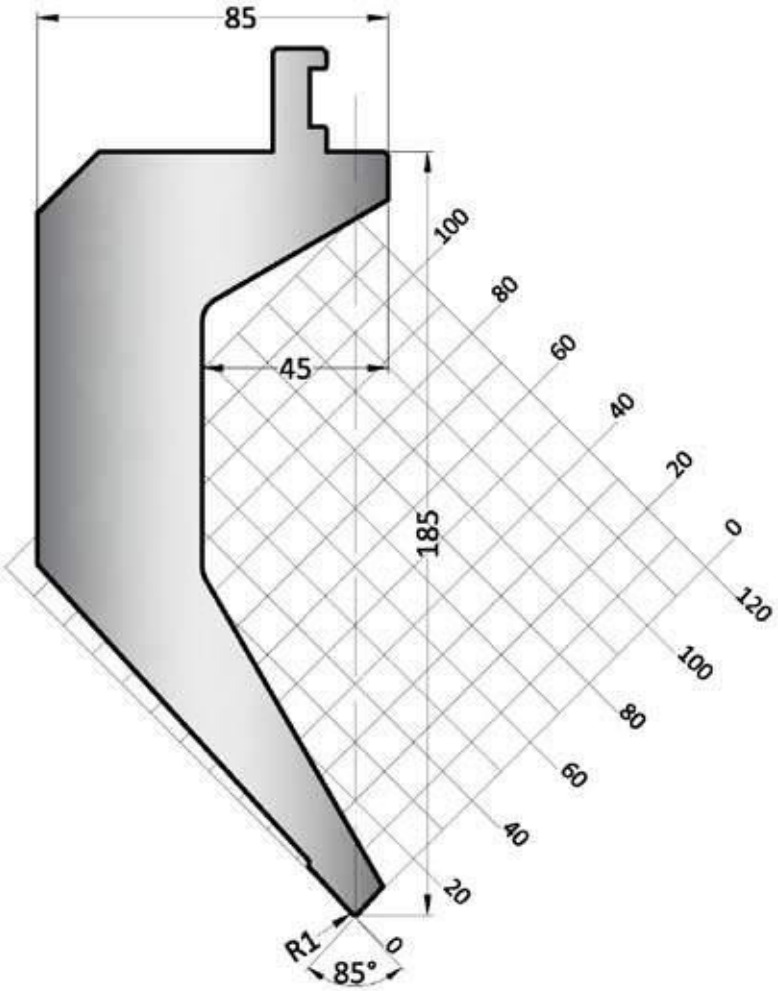


26°

Yellow Line

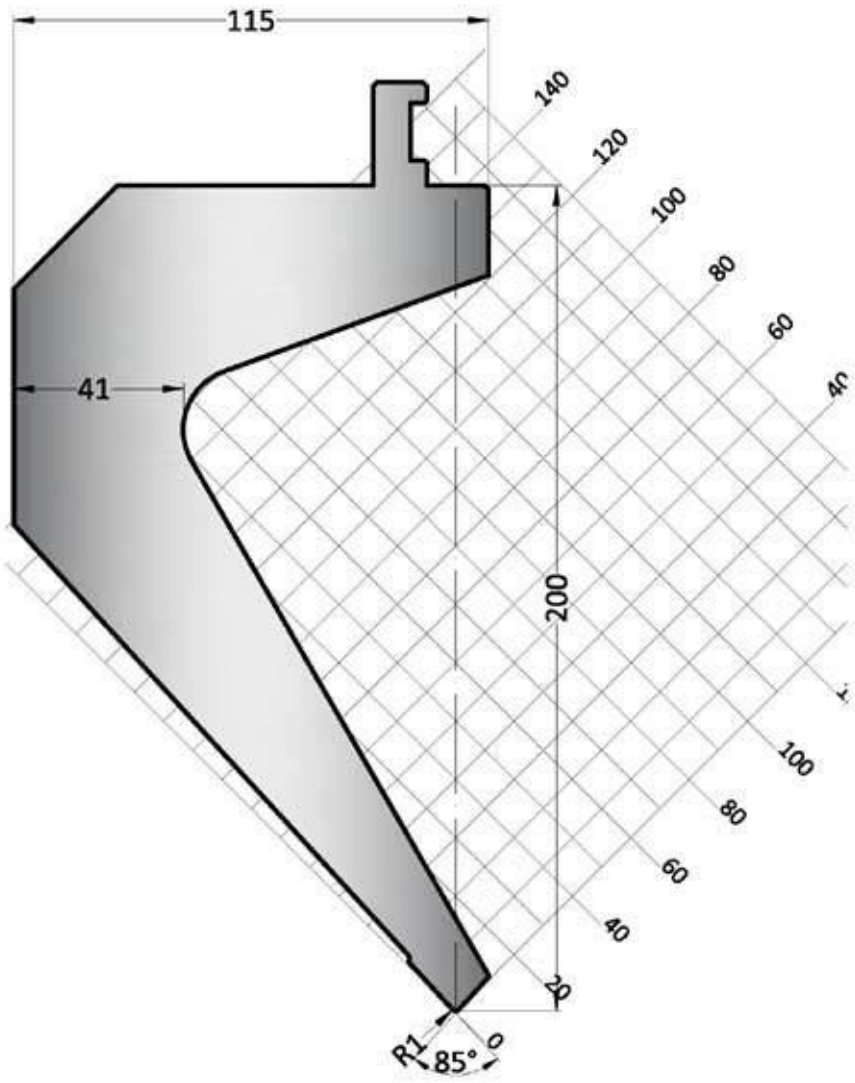
1.02.246

Yellow Line



85°

1.02.247

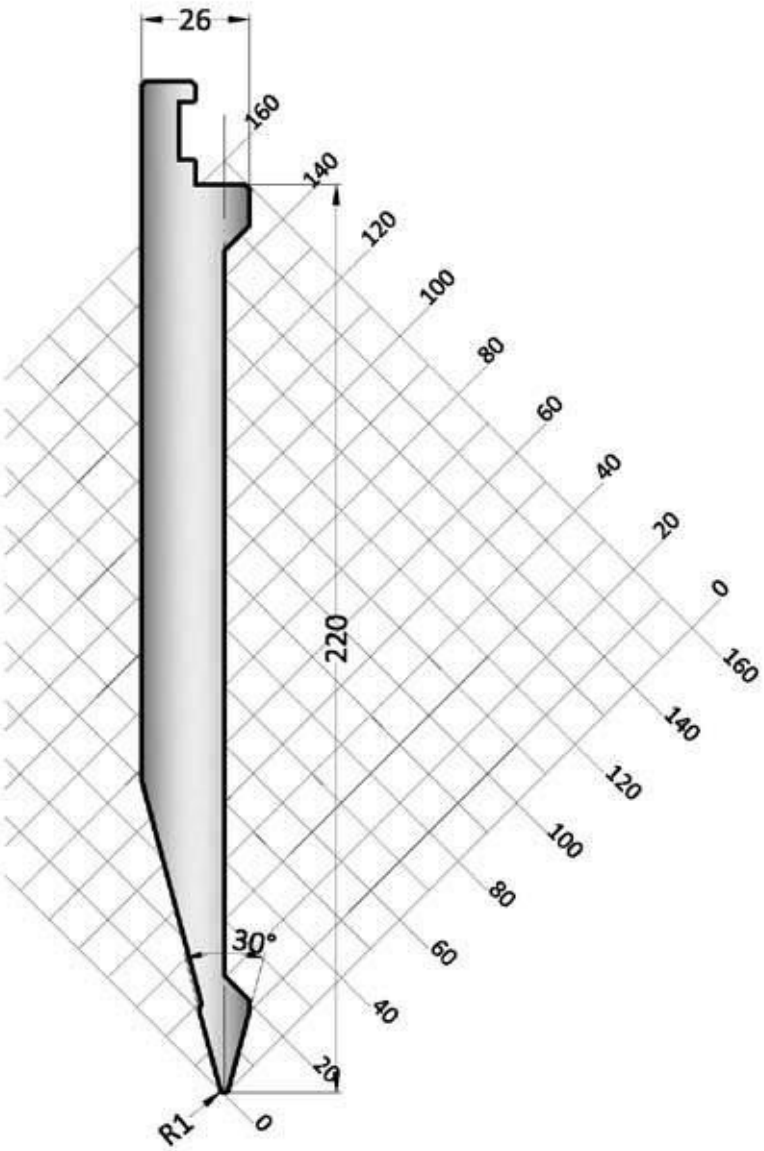


Yellow Line

85°

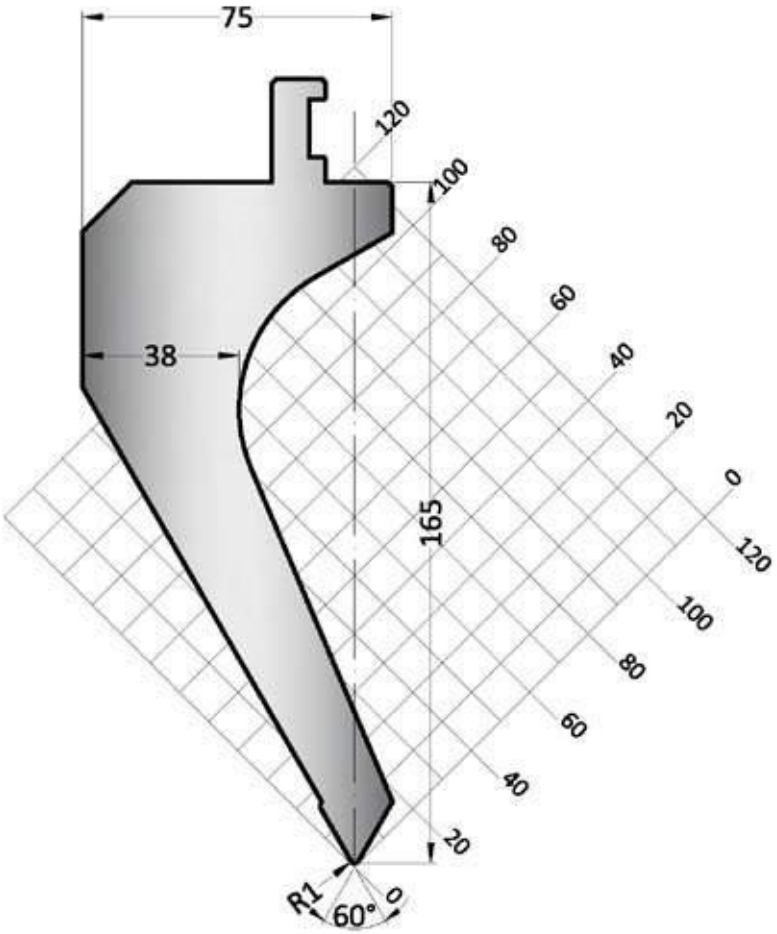
1.02.248

Yellow Line



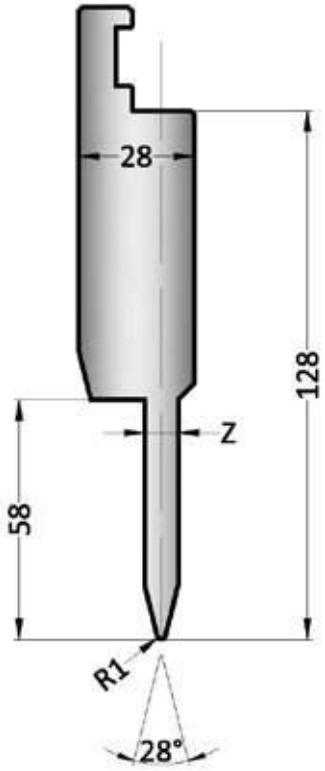
30°

1.02.249



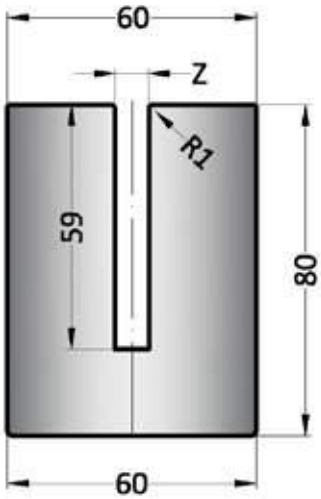
60°

	α	R	Z	H
1.02.241	28°	1.00	8	128.00
1.02.242	28°	1.00	10	128.00
1.02.243	28°	1.00	12	128.00

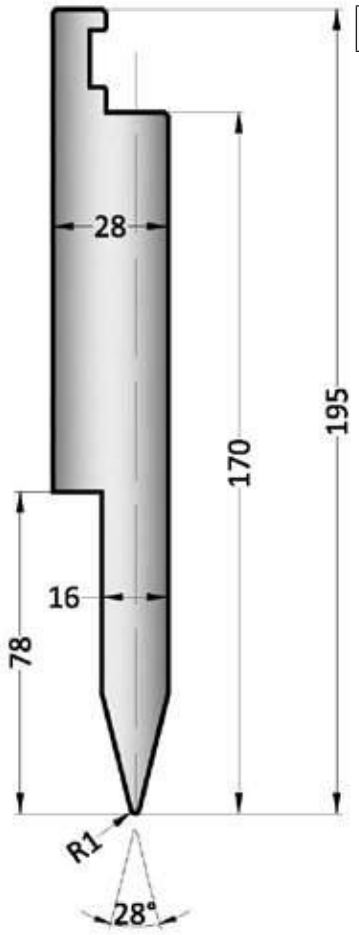


28°

	R	Z	H
20.550	1.00	8,2	80.00
20.554	1.00	10,2	80.00
20.560	1.00	12,2	80.00

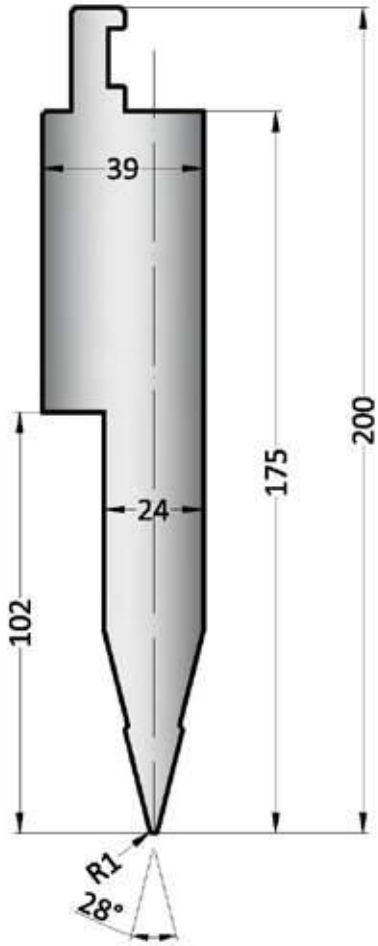


1.02.244



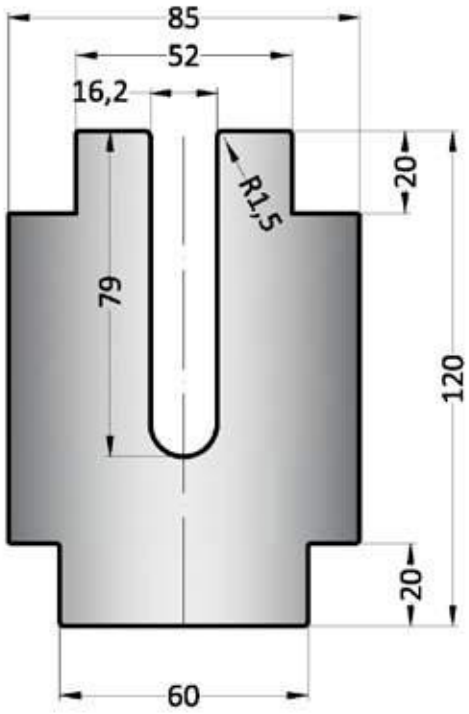
28°

1.02.245

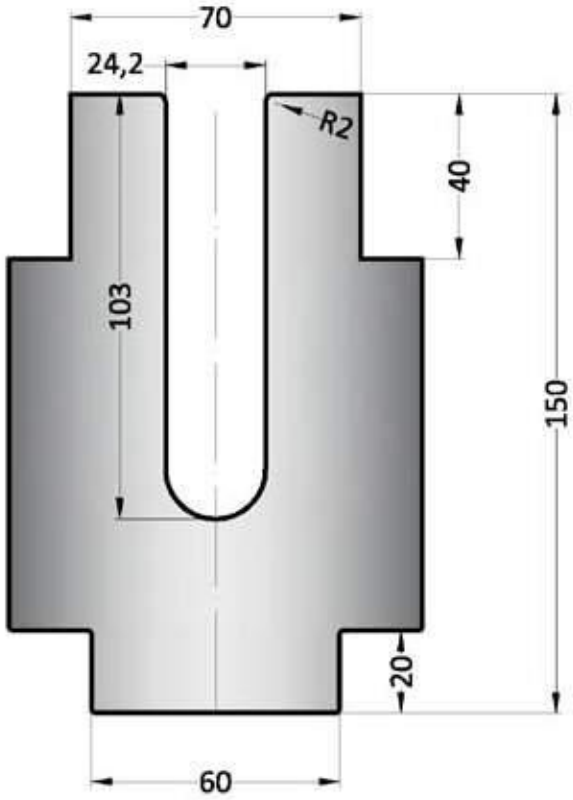


28°

2.14.335



2.14.336

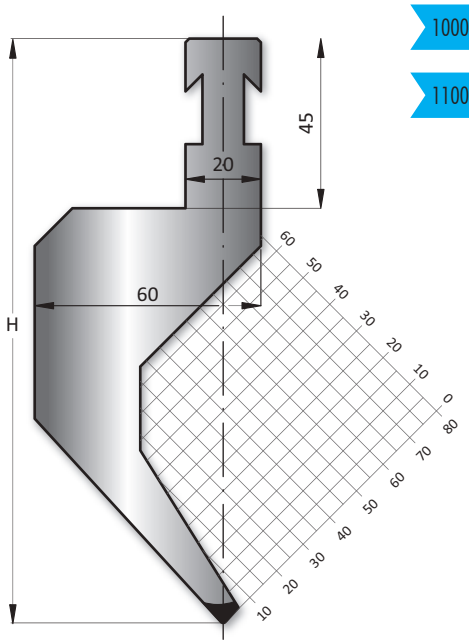


	Typ	α	R	H	T/mt	Mt
14.105	**R**	85°	0.80	155.00	50	III
14.106	**S**	85°	0.80	155.00	50	III

500 mm

1000 mm

1100 mm



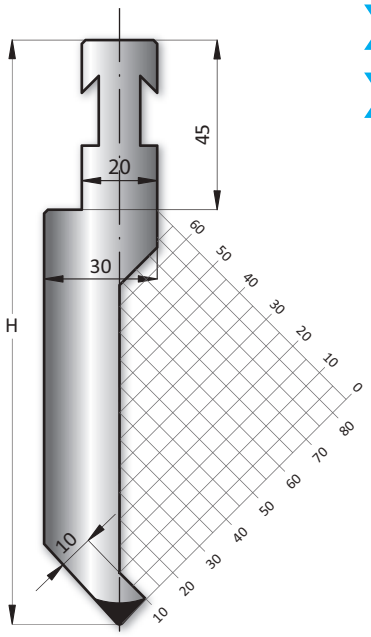
85°

	Typ	α	R	H	T/mt	Mt
14.209	**R**	85°	1.00	155.00	100	III
14.210	**S**	85°	1.00	155.00	100	III

500 mm

1000 mm

1100 mm



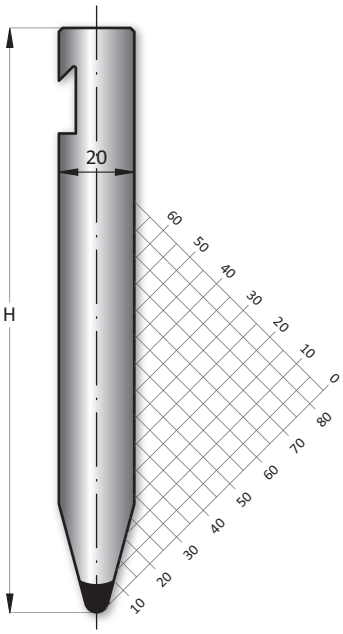
85°

	Typ	α	R	H	T/mt	Mt
14.300	**R**	30°	3.00	155.00	100	II
14.211	**S**	30°	3.00	155.00	10	II

500 mm

1000 mm

1100 mm



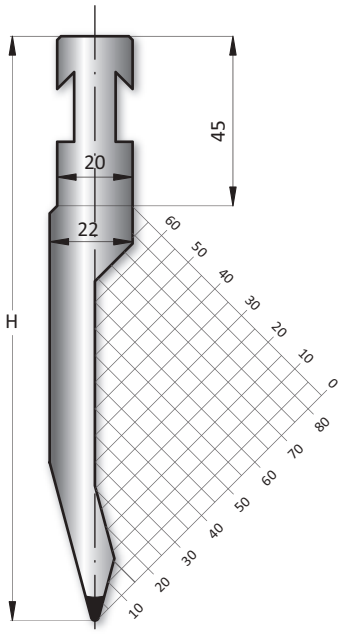
30°

	Typ	α	R	H	T/mt	Mt
14.330	**R**	30°	1.00	155.00	80	III
14.101	**S**	30°	1.00	155.00	80	III

500 mm

1000 mm

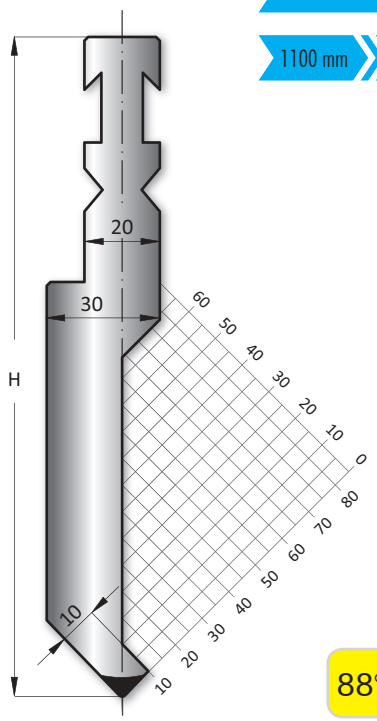
1100 mm



30°

	α	R	H	T/mt	Mt
14.353	88°	1.00	175.00	100	III

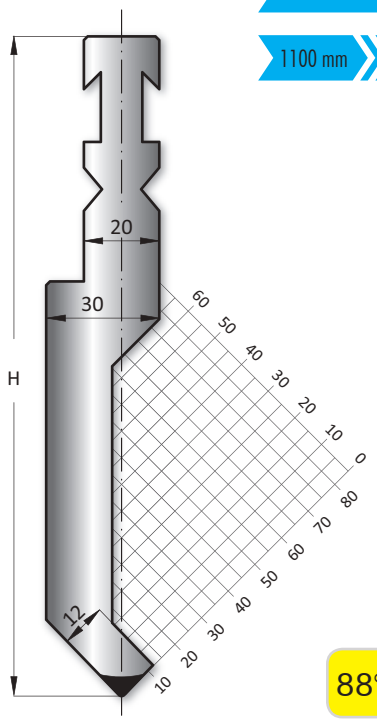
500 mm
1000 mm
1100 mm



88°

	α	R	H	T/mt	Mt
14.363	88°	1.00	175.00	100	III

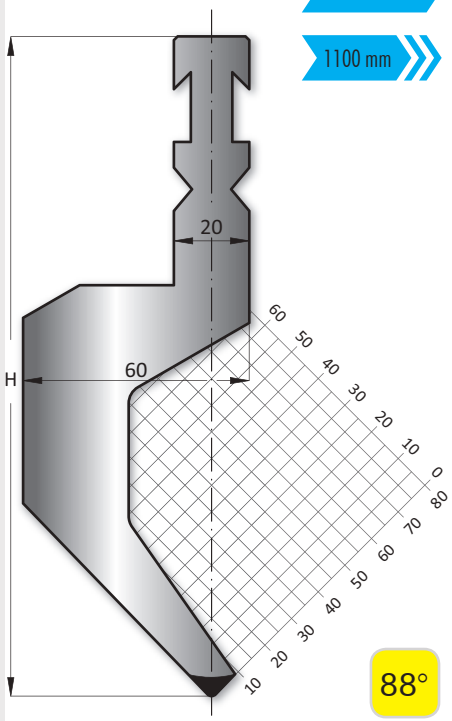
500 mm
1000 mm
1100 mm



88°

	α	R	H	T/mt	Mt
14.383	88°	1.50	175.00	50	III

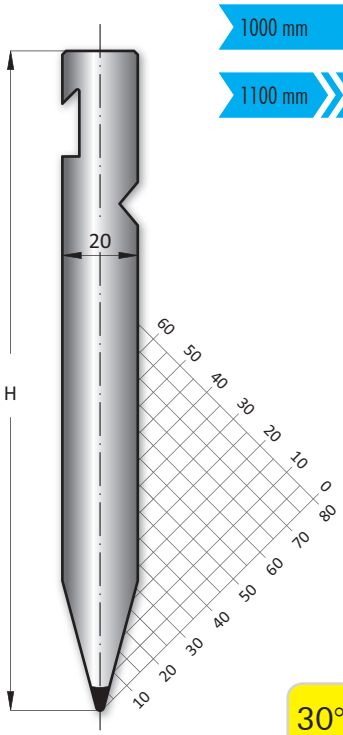
500 mm
1000 mm
1100 mm



88°

	α	R	H	T/mt	Mt
14.313	30°	1.00	175.00	100	II

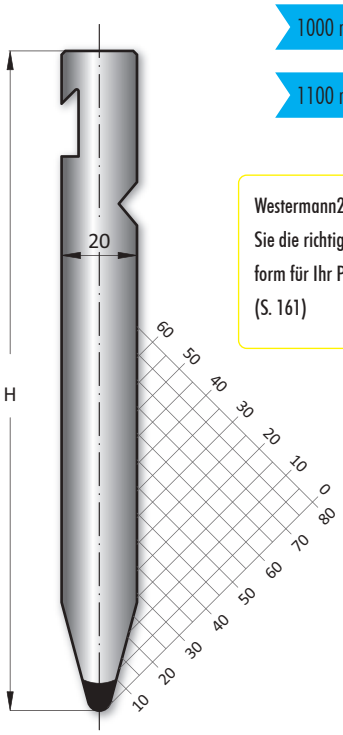
500 mm
1000 mm
1100 mm



30°

	α	R	H	T/mt	Mt
14.303	30°	3.00	175.00	100	II

500 mm
1000 mm
1100 mm

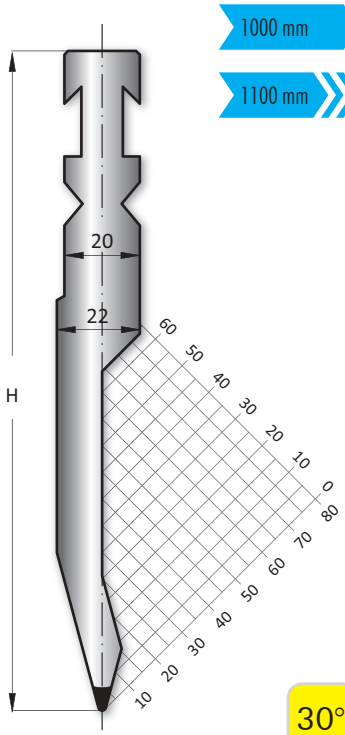


30°

Westermann24 entwickelt für Sie die richtige Werkzeugform für Ihr Produkt. (S. 161)

	α	R	H	T/mt	Mt
14.333	30°	1.00	175.00	80	III

500 mm
1000 mm
1100 mm



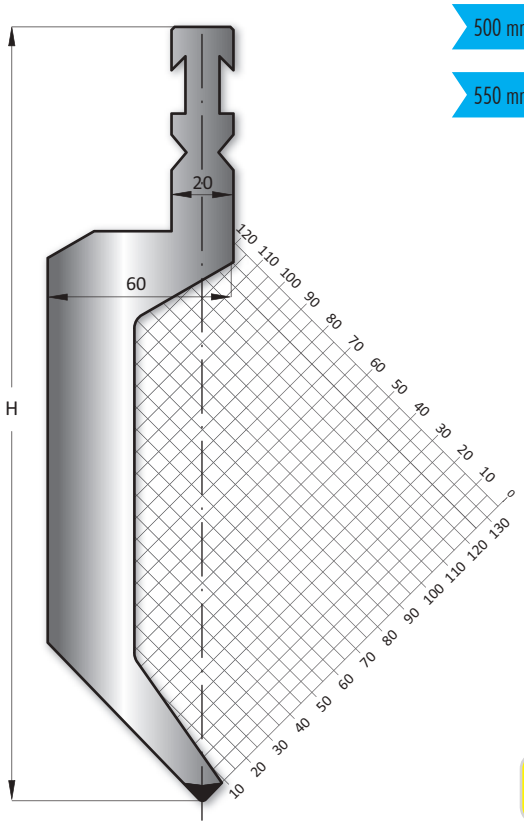
30°

Yellow Line

	α	R	H	T/mt	Mt
14.460	85°	1.50	250.00	50	III

500 mm

550 mm

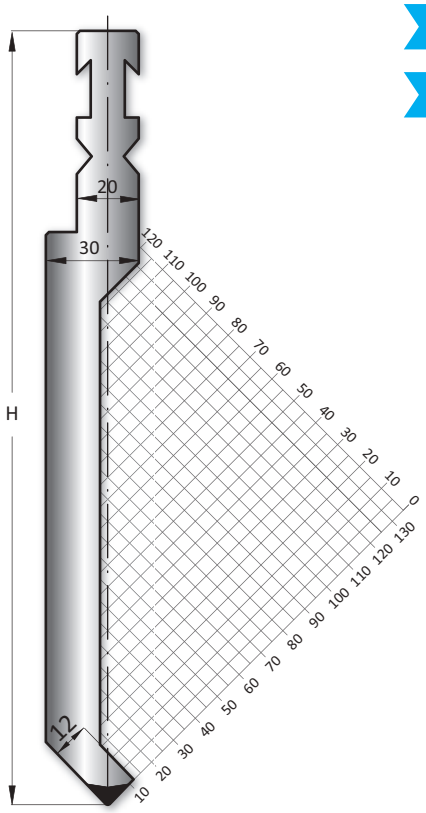


85°

	α	R	H	T/mt	Mt
14.450	85°	1.00	250.00	100	III

500 mm

550 mm

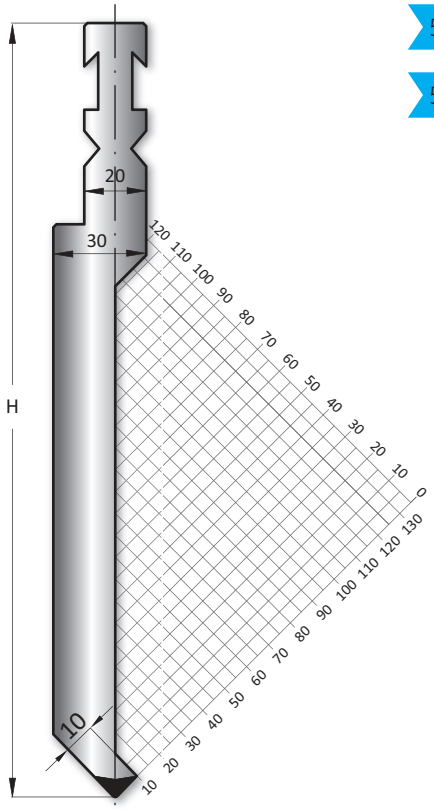


85°

	α	R	H	T/mt	Mt
14.440	85°	1.00	250.00	100	III

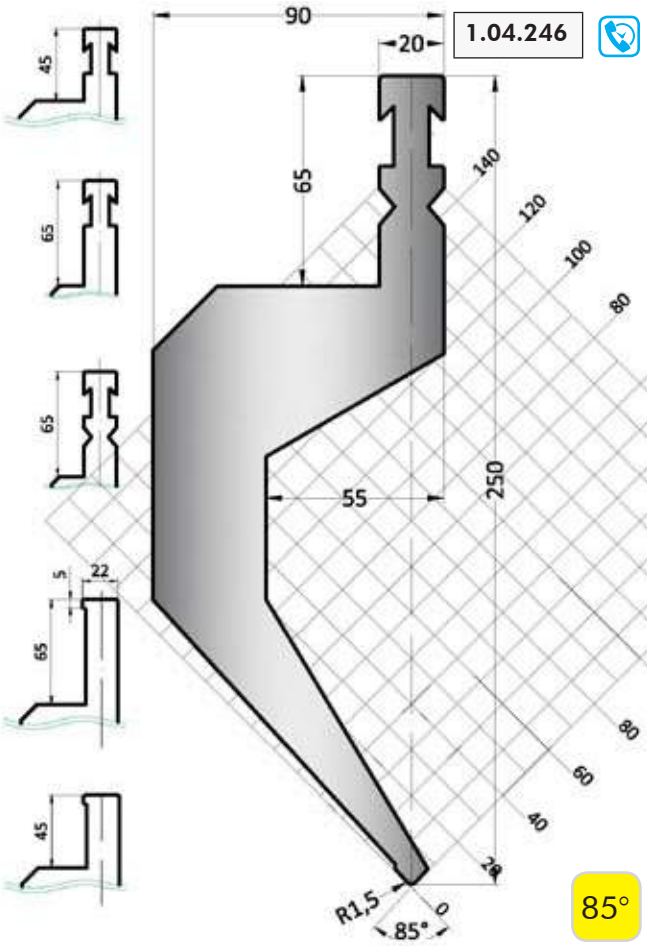
500 mm

550 mm



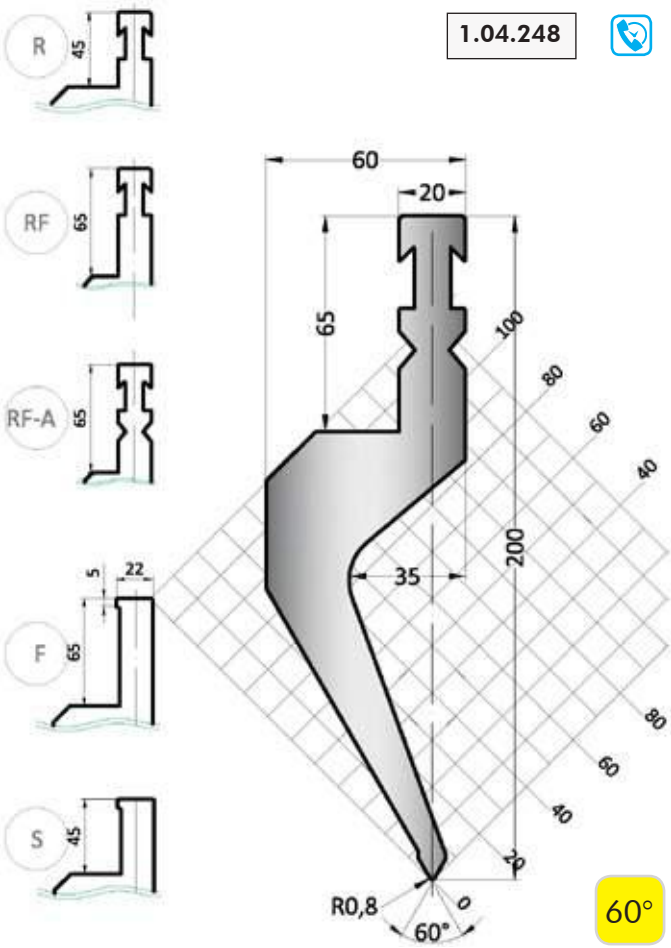
85°

1.04.246



85°

1.04.248

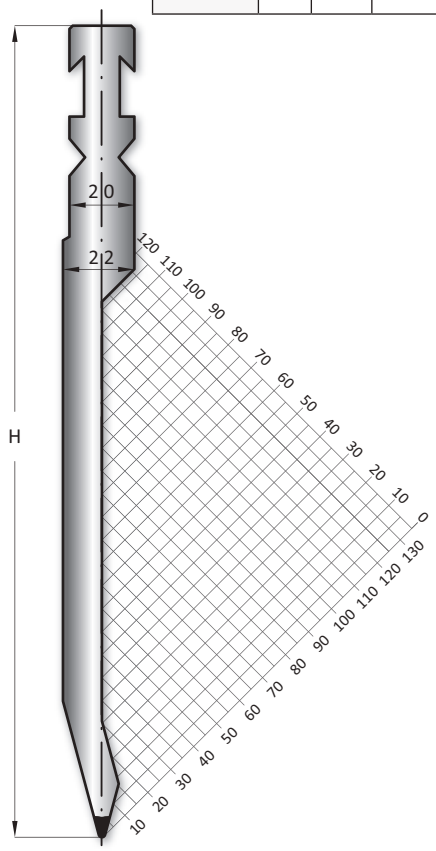


60°

	α	R	H	T/mt	Mt
14.430	30°	1.00	250.00	80	III

500 mm

550 mm

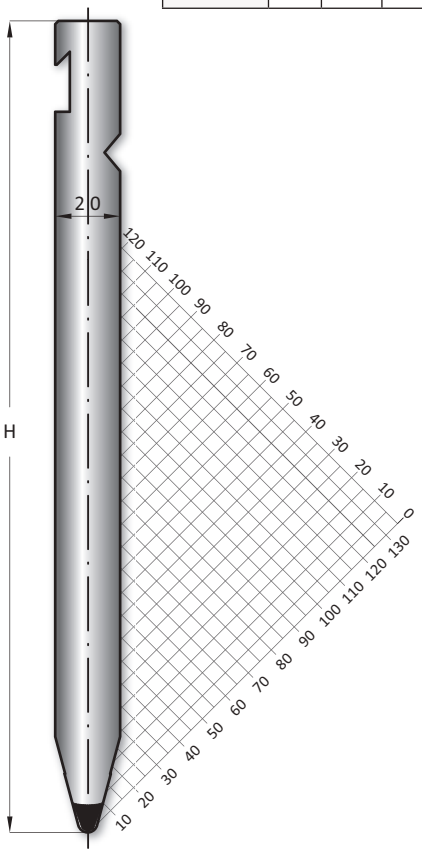


30°

	α	R	H	T/mt	Mt
14.410	30°	3.00	250.00	100	III

500 mm

550 mm

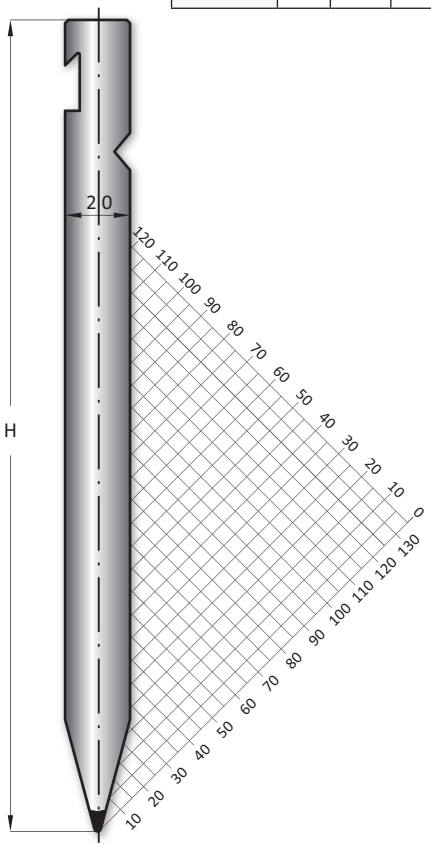


30°

	α	R	H	T/mt	Mt
14.420	30°	1.00	250.00	100	III

500 mm

550 mm



30°

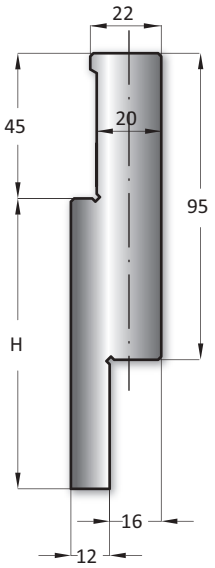
Yellow Line

	Typ	H	Mt
14.281	S	90.00	III

100 mm

500 mm

550 mm

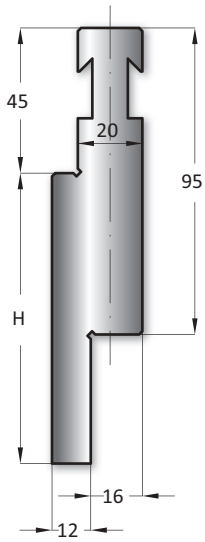


	Typ	H	Mt
14.280	R	90.00	III

100 mm

500 mm

550 mm

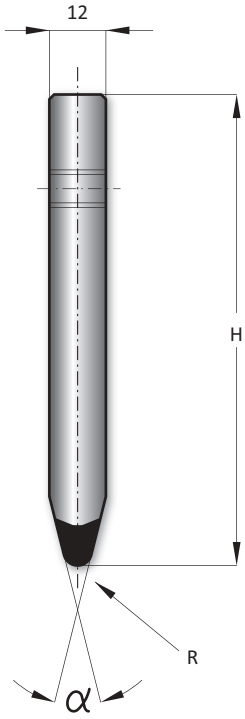


	α	R	H	T/mt	Mt
15.776	86°	1.00	100	100	III
15.774	84°	1.00	100	100	III
15.769	28°	6.00	100	100	III
15.768	28°	5.00	100	100	III
15.767	28°	4.00	100	100	III
15.766	28°	3.00	100	100	III
15.765	28°	2.00	100	100	III
15.763	28°	1.00	100	100	III
15.761	28°	0.50	100	100	III

100 mm

500 mm

550 mm

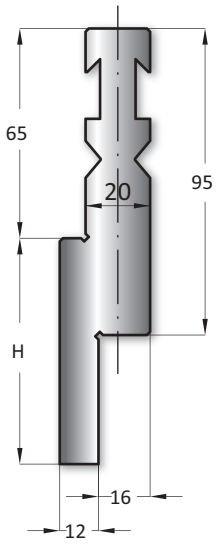


	Typ	H	Mt
14.282	RFA	70.00	III

100 mm

500 mm

550 mm

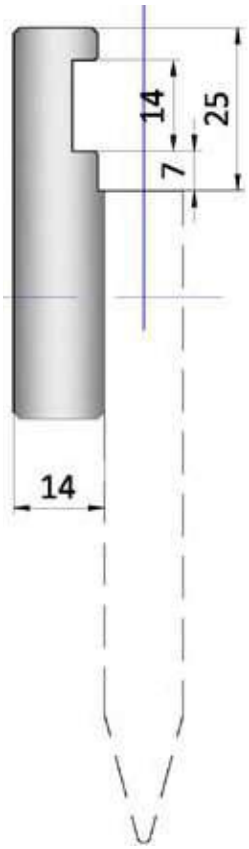


	Typ	H	Mt
14.400	EURO		

100 mm

500 mm

550 mm



86°

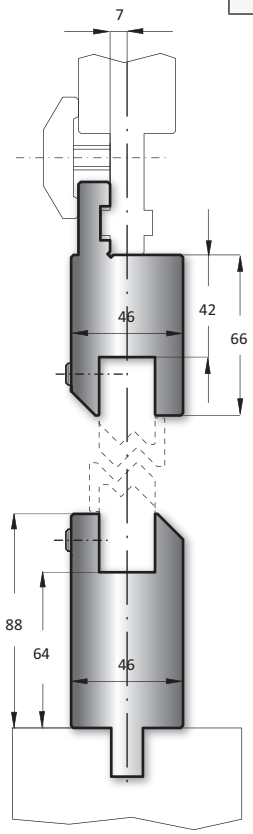
84°

28°

	Typ	T/mt	Mt
14.095	EURO	100	I

415 mm

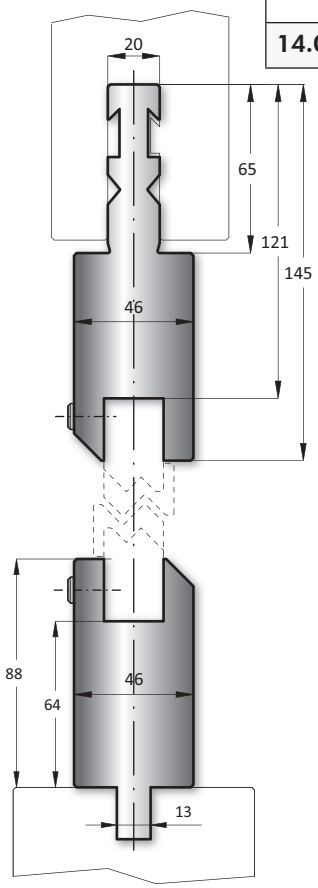
835 mm



	Typ	T/mt	Mt
14.080	RFA	100	I

415 mm

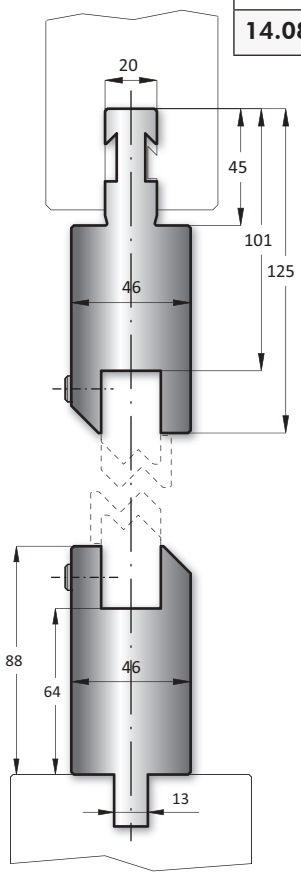
835 mm



	Typ	T/mt	Mt
14.085	R	100	I

415 mm

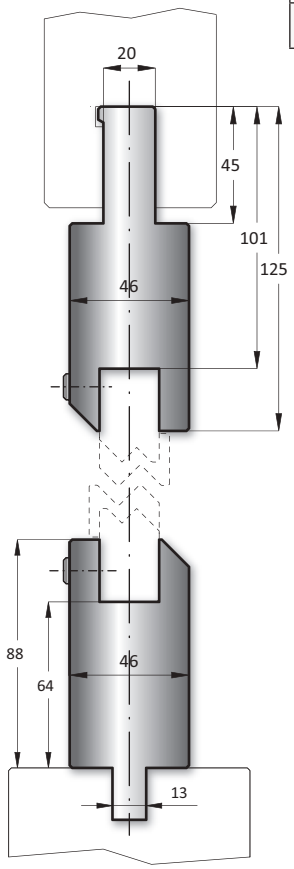
835 mm



	Typ	T/mt	Mt
14.090	S	100	I

415 mm

835 mm

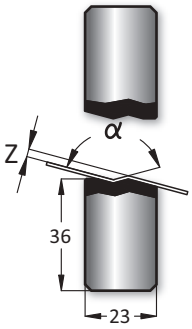


Yellow Line

415 mm

835 mm

	Z	α	T/mt	Mt
40.510	1.00	160°	100	I
40.515	1.50	160°	100	I
40.520	2.00	150°	100	I
40.525	2.50	140°	100	I



160°

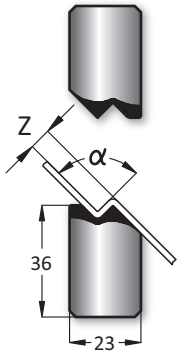
150°

140°

415 mm

835 mm

	Z	α	T/mt	Mt
40.511	1.00	90°	100	I
40.516	1.50	90°	100	I
40.521	2.00	90°	100	I
40.526	2.50	90°	100	I
40.530	3.00	90°	100	I
40.535	3.50	90°	100	I
40.540	4.00	90°	100	I
40.545	4.50	90°	100	I
40.550	5.00	90°	100	I
40.555	5.50	90°	100	I
40.560	6.00	90°	100	I
40.565	6.50	90°	100	I
40.570	7.00	90°	100	I
40.575	7.50	90°	100	I
40.580	8.00	90°	100	I

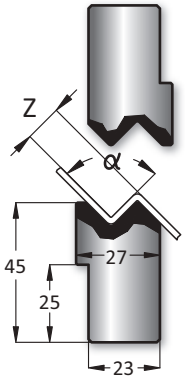


90°

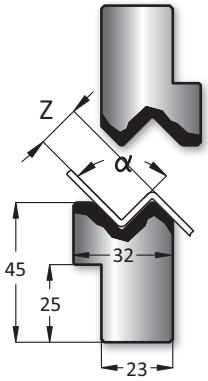
415 mm

835 mm

	Z	α	T/mt	Mt
40.590	9.00	90°	100	I
40.610	10.00	90°	100	I
40.611	11.00	90°	100	I
40.612	12.00	90°	100	I



90°

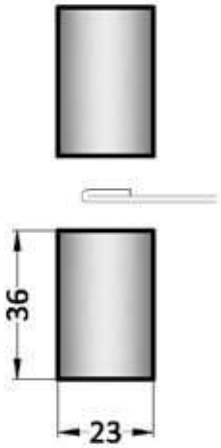


	Z	α	T/mt	Mt
40.613	13.00	90°	100	I
40.614	14.00	90°	100	I
40.615	15.00	90°	100	I

415 mm

835 mm

90°



	Z	α	T/mt	Mt
40.500				I

415 mm

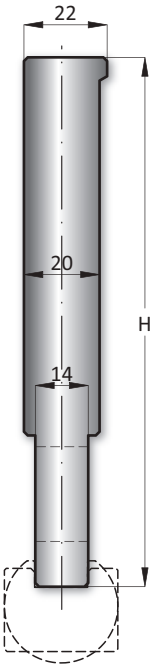
835 mm

90°

	Typ	H	T/mt	Mt
14.251	S	140.00	80	I

412 mm

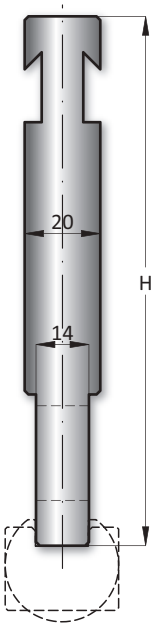
830 mm



	Typ	H	T/mt	Mt
14.250	R	140.00	80	I

412 mm

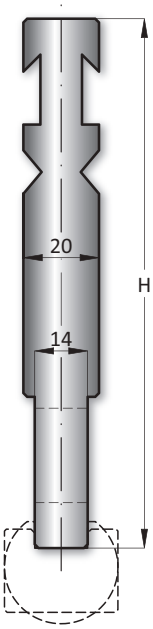
830 mm



	Typ	H	T/mt	Mt
14.252	RFA	140.00	80	I

412 mm

830 mm

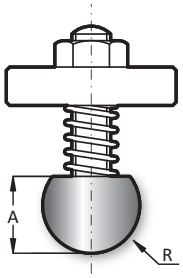


Yellow Line

415 mm

835 mm

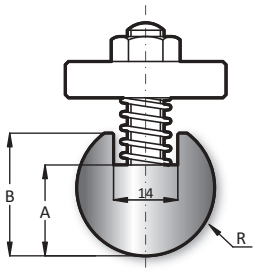
	R	A
10.300	7.00	11.50
10.301	7.50	11.50
10.302	8.00	13.00
10.303	9.00	16.00
10.304	10.00	16.00
10.305	11.00	16.00
10.306	11.50	19.00
10.307	12.00	20.00



415 mm

835 mm

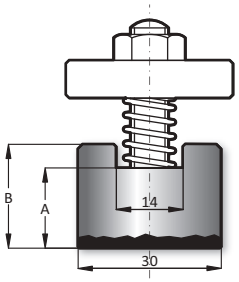
	R	A	B
10.308	12.50	16.00	21.00
10.309	13.00	17.00	23.00
10.310	14.00	19.00	25.00
10.311	15.00	20.00	27.00
10.312	16.00	21.00	28.00
10.313	17.00	21.50	31.50
10.314	17.50	22.00	32.00
10.315	19.00	25.00	32.00
10.316	20.00	24.00	34.00
10.317	22.50	25.00	33.00
10.318	25.00	29.00	39.00
10.319	27.50	34.00	44.00
10.320	30.00	34.00	44.00
10.321	35.00	45.00	55.00
10.322	40.00	45.00	55.00
10.323	45.00	50.00	60.00
10.324	50.00	54.00	64.00



415 mm

835 mm

	A	B
10.325	17.00	22.00



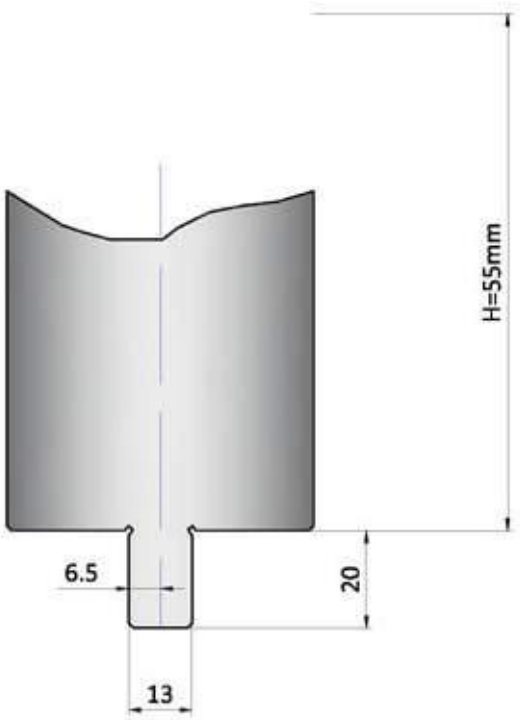
Westermann24 liefert Ihnen Lösungen für Halter mit Einsatz.
(S. 163)

Unterwerkzeuge / Lower tools

direkt einsetzbar auf Abkantpressen von / directly able to work on bending presses of:

Bystronic-Beyeler, Bystronic-Hämmerle, Safan, SMD, Trumpf, oder mit Tischnut für Zapfen 13 x 20 mm

Yellow Line



direkt einsetzbar auf Abkantpressen von:
Bystronic-Beyeler, Bystronic-Hämmerle, Safan, SMD, Trumpf, oder mit Tischnut für Zapfen 13 x 20 mm

directly able to work on bending presses of:
Bystronic-Beyeler, Bystronic-Hämmerle, Safan, SMD, Trumpf, or with table anchoring slots for pivots 13 x 20 mm

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Unterwerkzeuge:
UW 1100mm sektioniert in : 10,15,20,30,40,50,60,75,100,100,200,400mm

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden.
(siehe Seite 161)

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

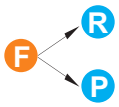
used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

design:
All radii are grinded and hardened

length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

tool sets divided into sections:
Lower tool:
UW 1100mm sectioned in : 10,15,20,30,40,50,60,75,100,100,200,400mm

loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)



H=55

H=60

H=65

500 mm

1000 mm

1100 mm

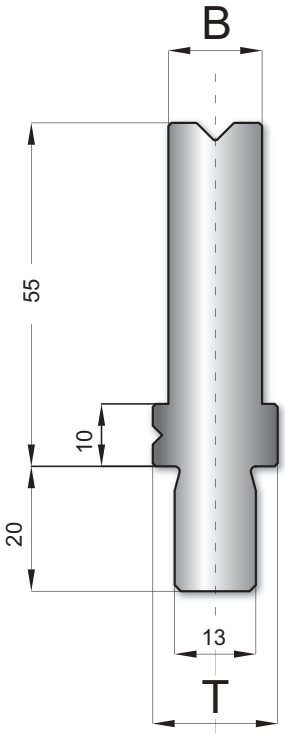
Yellow Line

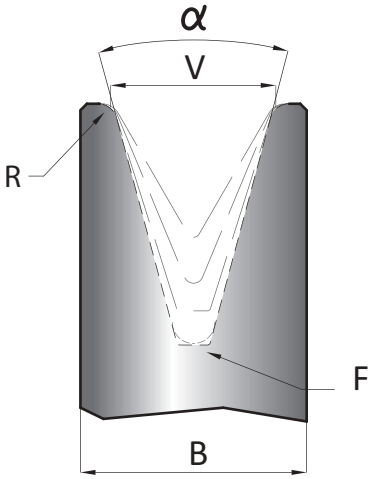
90°	V	R	H	B	T	F	T/mt	Mt
24.001	6	0,4	55	15	20	R 0,5	100	I
24.002	8	0,5	55	15	20	R 0,5	100	I
24.003	10	1,0	55	20	20	R 0,5	100	I
24.005	12	1,5	55	20	20	R 0,5	100	I
24.007	16	2,0	55	30	30	R 0,5	100	I

88°	V	R	H	B	T	F	T/mt	Mt
24.004	10	1,0	55	20	20	R 0,5	100	I
24.006	12	1,5	55	20	20	R 0,5	100	I
24.008	16	2,0	55	30	30	R 0,5	100	I
24.009	20	2,0	55	30	30	R 0,5	100	I
24.010	24	3,0	55	40	40	R 0,5	100	I

85°	V	R	H	B	T	F	T/mt	Mt
24.011	32	4,0	55	50	50	R 3,0	100	I
24.012	40	4,0	55	55	55	R 4,0	100	I

80°	V
2.10.217	16
2.10.218	20
2.10.219	24
2.10.220	30
2.10.221	35
2.10.222	40
2.10.223	50
2.10.224	60





Legende - Legend	Technik - technique
F = Nutgrund - ground of the groove	
R = radius	
P = flach - flat	

60°	V	R	H	B	T	F	T/mt	Mt
2.10.211	16							
2.10.212	20							
2.10.213	24							
2.10.214	30							
2.10.215	35							
24.040	40	5,0	55	55	55	R 5,0	100	I
24.050	50	5,0	55	70	70	P 15,0	100	I
24.060	60	7,0	65	80	80	P 15,0	100	I

	α	V	R	H	B	T	F	T/mt	Mt
24.013	30°	6	0,6	55	15	20	R 1,0	35	III
24.014	30°	8	0,8	55	15	20	P 2,0	35	III
24.015	30°	10	1,0	55	20	20	P 2,0	50	III
24.016	30°	12	1,5	55	20	20	P 2,0	40	III
24.017	30°	16	2,0	55	30	30	P 5,0	45	III
24.019	30°	20	2,5	55	35	35	P 5,0	50	III
24.018	30°	24	3,0	55	40	40	P 8,0	50	III
24.035	30°	32	4,0	60	60	60	P 10,0	50	III

90°

88°

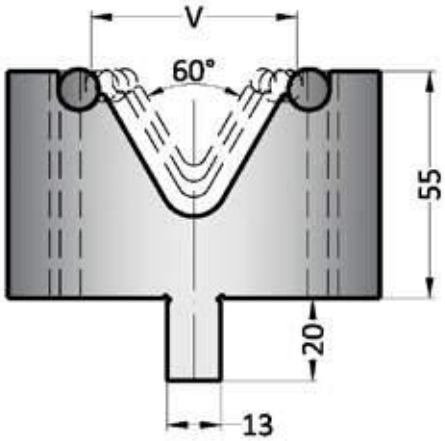
85°

80°

60°

30°

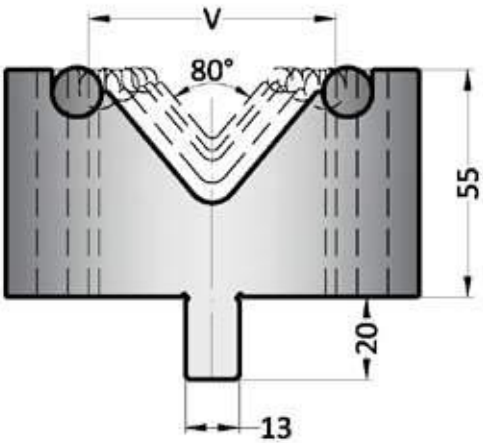
	V	α	H
2.19.010	30	60°	55.00
2.19.011	35	60°	55.00
2.19.012	40	60°	55.00
2.19.013	50	60°	55.00



Westermann-Steckmatrize - mit Einlaufwellen 60°

60°

	V	α	H
2.19.014	30	80°	55.00
2.19.015	35	80°	55.00
2.19.016	40	80°	55.00
2.19.017	50	80°	55.00
2.19.018	60	80°	55.00



Westermann 24 liefert Ihnen Matrizen mit Welleneinsatz. (S. 162)

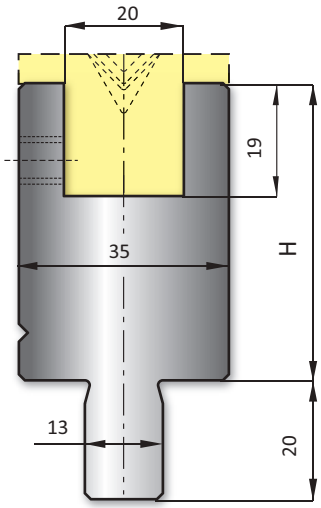
Westermann-Steckmatrize - mit Einlaufwellen 80°

80°

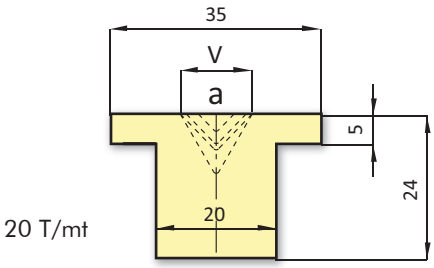
	H	Mt
22.004	50.00	I

415 mm

835 mm



Weitere Möglichkeiten für abdruckfreies Kanten (ab S. 177)



20 T/mt

	V	α
32.306	**6**	30°
32.308	**8**	30°
32.310	**10**	30°
32.406	**6**	45°
32.408	**8**	45°
32.410	**10**	45°
32.412	**12**	45°
32.606	**6**	60°
32.608	**8**	60°

	V	α
32.610	**10**	60°
32.612	**12**	60°
32.616	**16**	60°
32.806	**6**	88°
32.808	**8**	88°
32.810	**10**	88°
32.812	**12**	88°
32.816	**16**	88°

415 mm

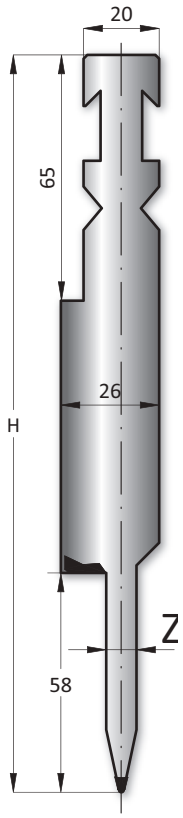
835 mm

Yellow Line

	α	R	H	Z	T/mt	Mt
14.908	24°	0.60	195.00	8	80	II
14.910	24°	0.60	195.00	10	80	II
14.912	24°	0.60	195.00	12	80	II

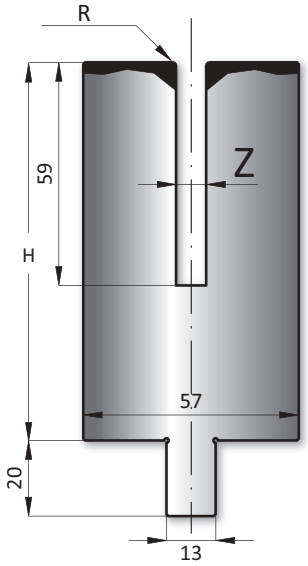
500 mm

550 mm



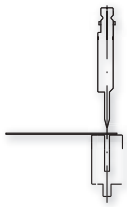
24°

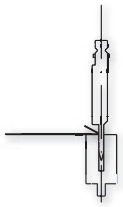
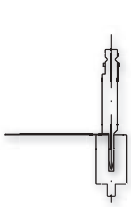
	R	H	Z	T/mt	Mt
25.992	1.00	100.00	8,2	50	II
25.994	1.00	100.00	10,2	50	II
25.995	1.00	100.00	12,2	50	II



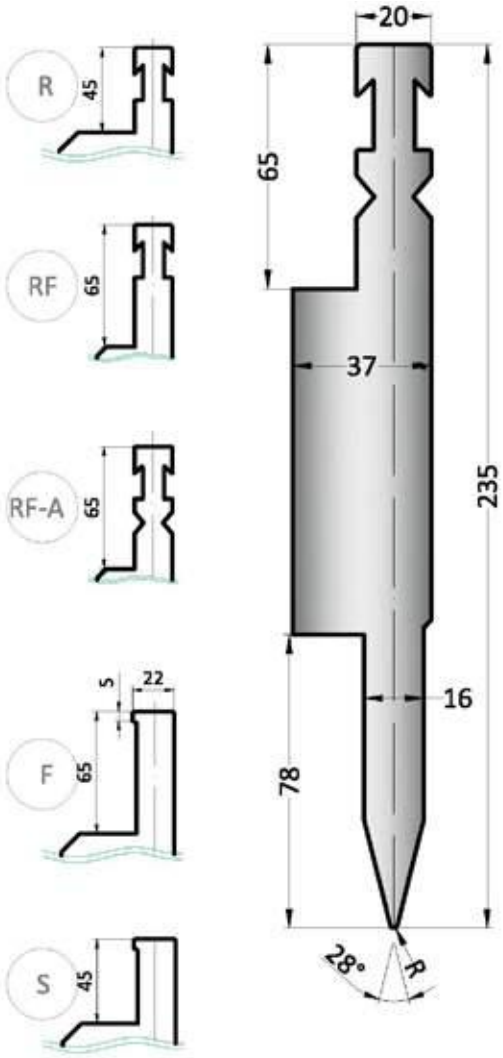
500 mm

550 mm



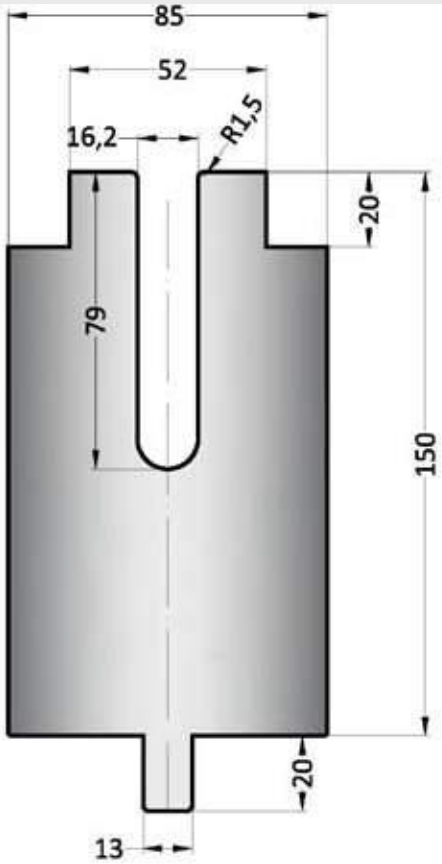
1.04.252



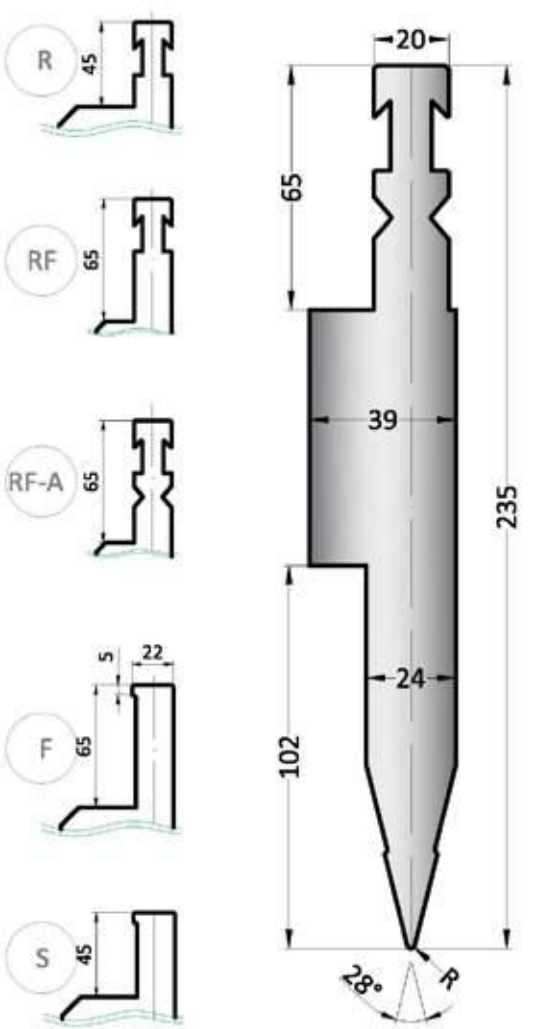
28°

Yellow Line

2.12.186

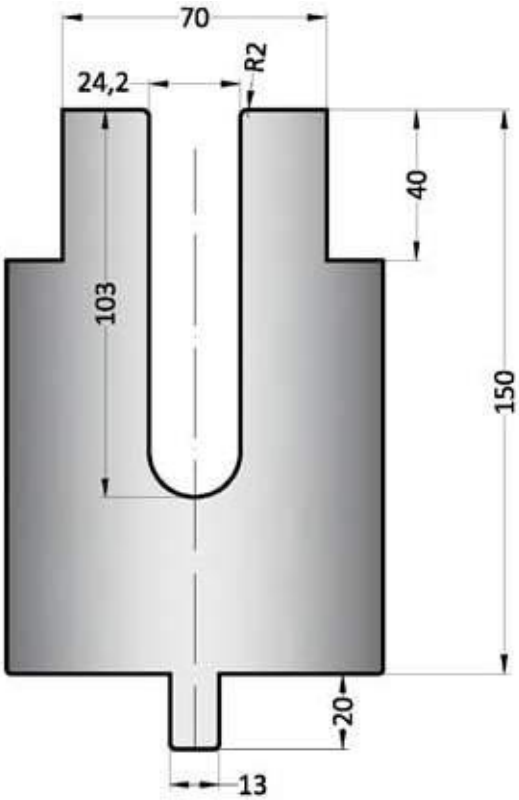


1.04.253



28°

2.12.187

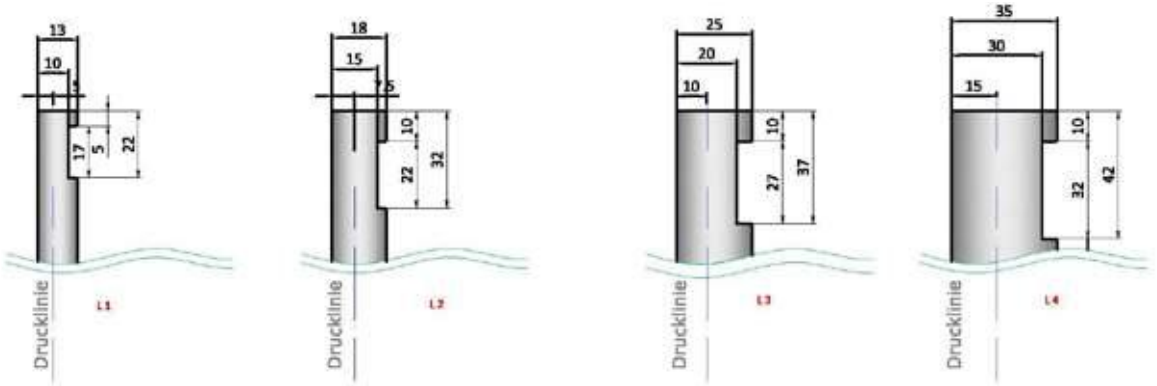


Ober- und Unterwerkzeuge / Upper and lower tools

direkt einsetzbar auf Abkantpressen von / directly able to work on bending presses of:

LVD (S. 102-112), EHT (S. 117-131), Weinbrenner (S. 132-151), Haco (S. 152-158)

Red Line L



direkt einsetzbar auf Abkantpressen von:
LVD

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Oberwerkzeuge:
OW 550mm sektioniert in : 25,25,30,35,40,45,50,100, 100 Horn links, 100 Horn rechts

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden.
(siehe Seite 161)

directly able to work on bending presses of:
LVD

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

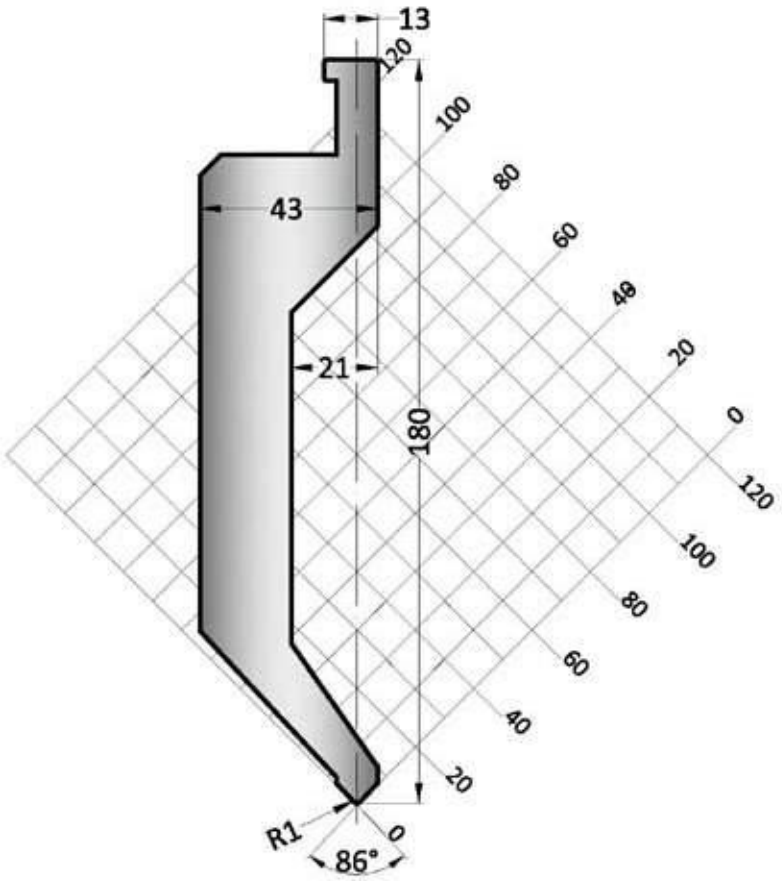
design:
All radii are grinded and hardened

length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

tool sets divided into sections:
Upper tool:
OW 550mm sectioned in : 25,25,30,35,40,45,50,100, 100 horn left, 100 horn right

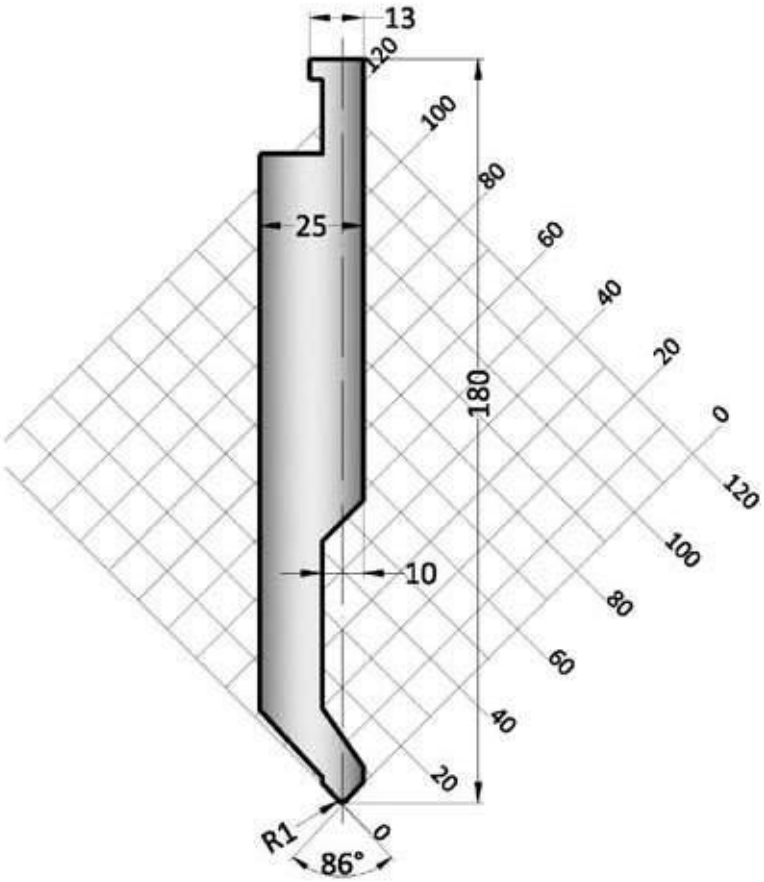
loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

1.09.030



86°

1.09.050

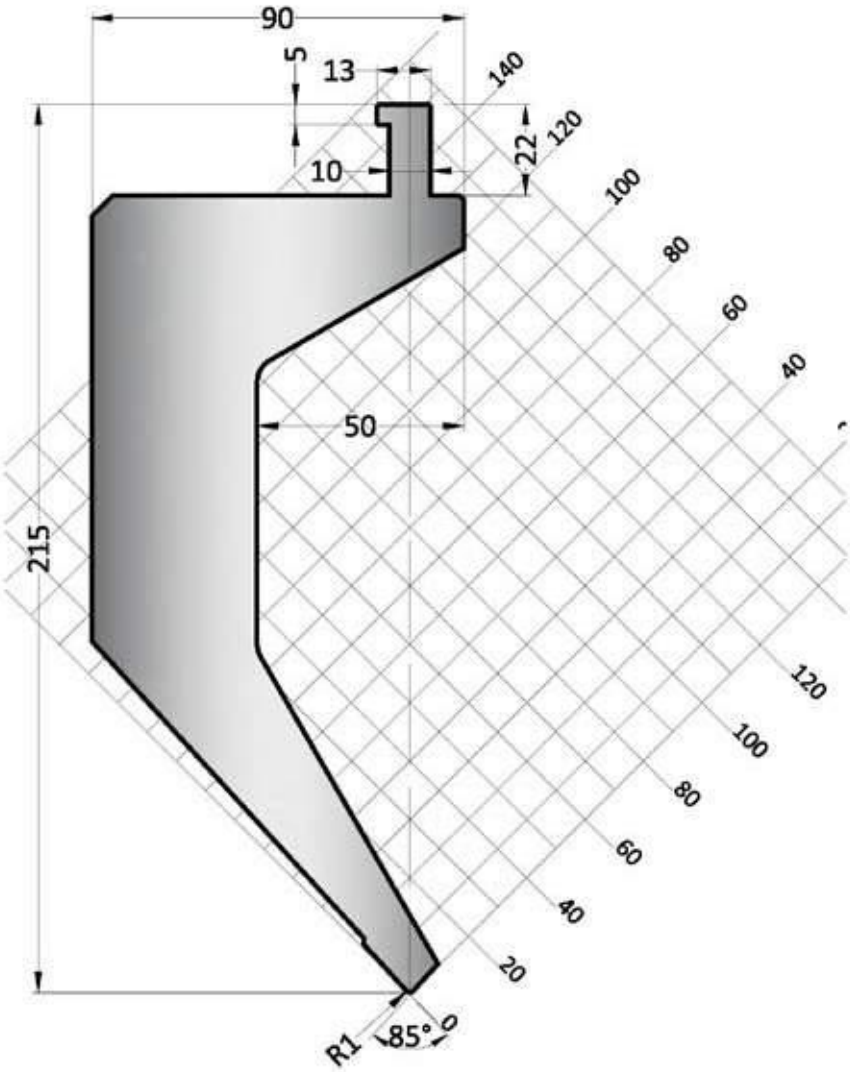


Westermann24 entwickelt für Sie die richtige Werkzeugform für Ihr Produkt. (S. 161)

86°

Red Line

1.09.061

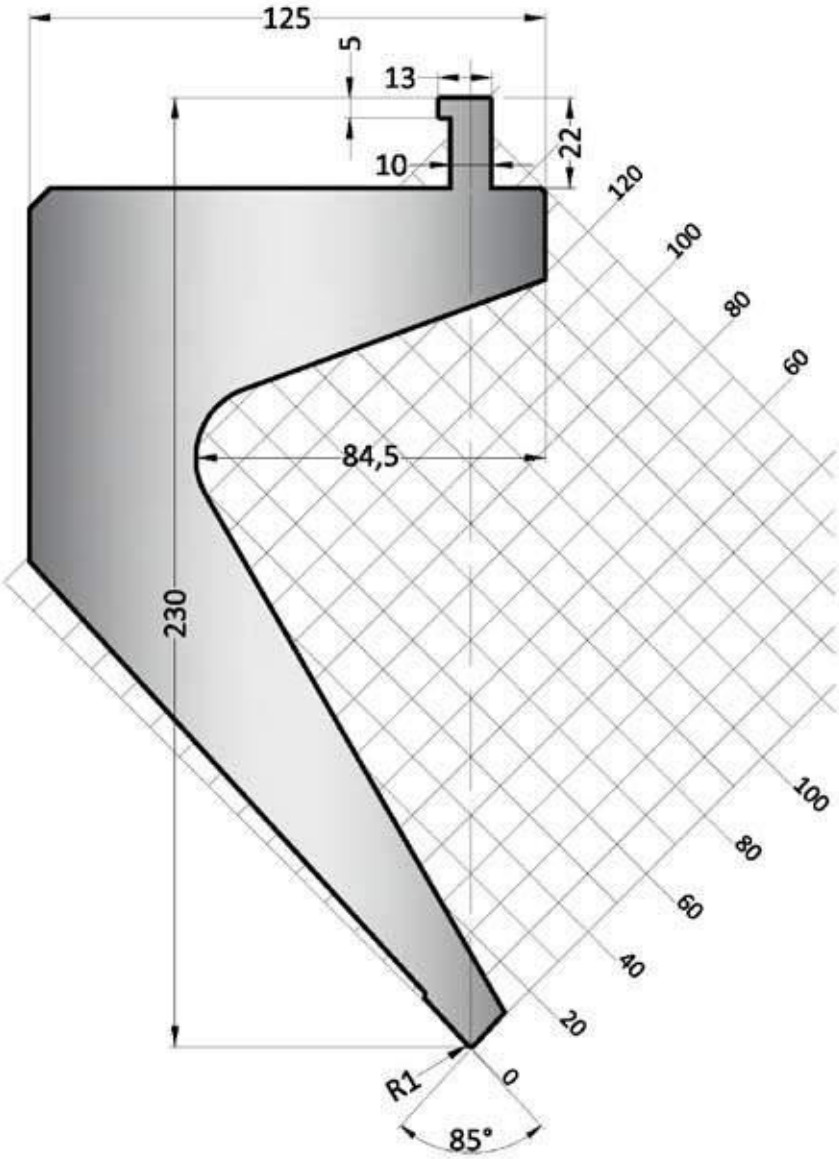


Westermann24 entwickelt für Sie die richtige Werkzeugform für Ihr Produkt. (S. 161)

85°

Red Line

1.09.062



Red Line

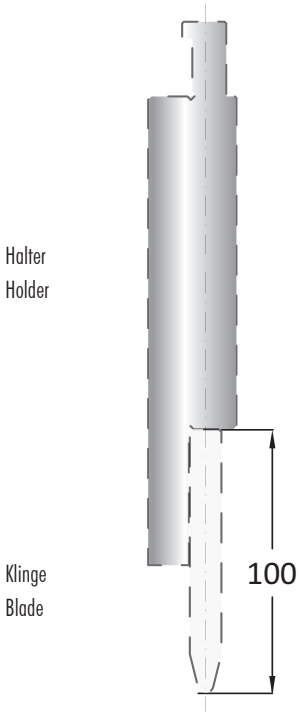
86°

1.09.010

Red Line

26°

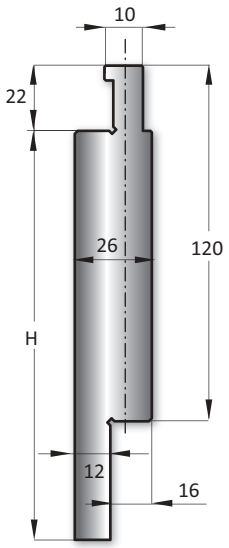
Montagebeispiel - Assembly Scheme



	H	Mt
16.070	138.00	III

500 mm

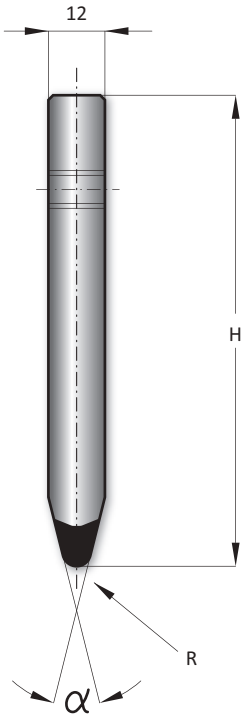
550 mm



100 mm

500 mm

550 mm



	α	R	H	T/mt	Mt
15.776	86°	1.00	100	100	III
15.774	84°	1.00	100	100	III
15.769	28°	6.00	100	100	III
15.768	28°	5.00	100	100	III
15.767	28°	4.00	100	100	III
15.766	28°	3.00	100	100	III
15.765	28°	2.00	100	100	III
15.763	28°	1.00	100	100	III
15.761	28°	0.50	100	100	III

86°

84°

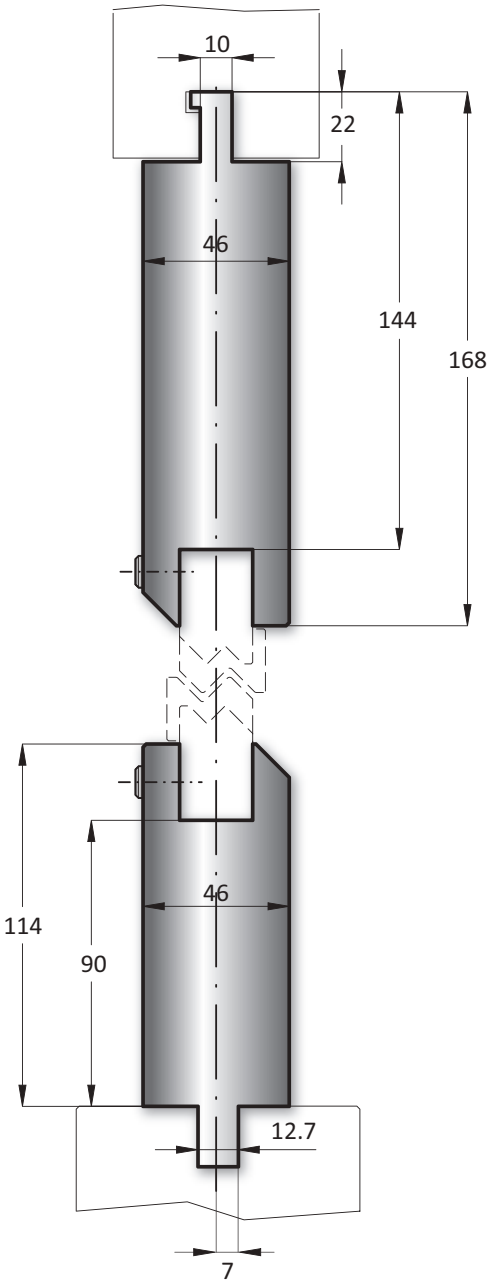
28°

Red Line

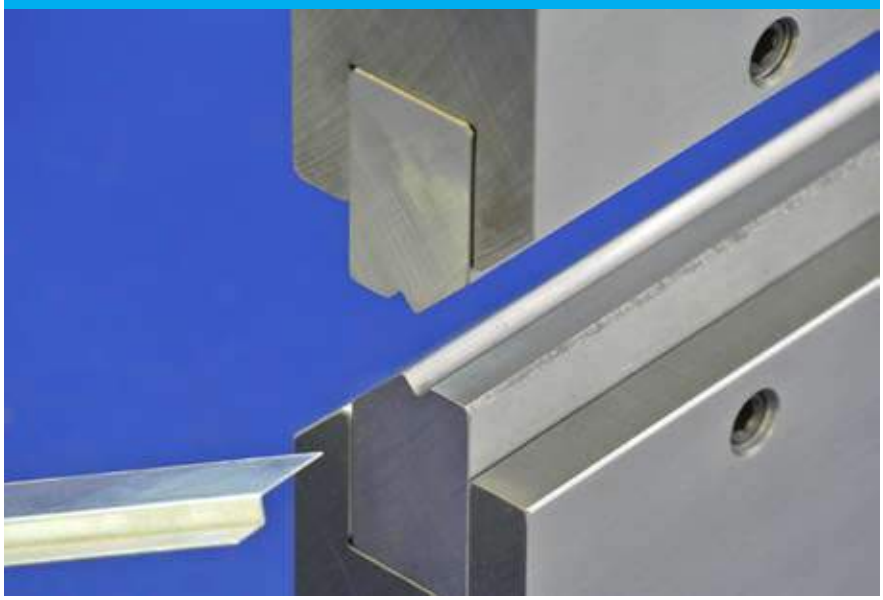
	T/mt	Mt
16.050	100	I

415 mm

835 mm



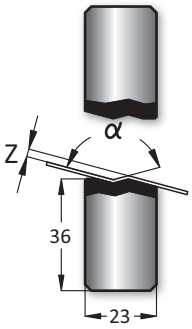
Montagebeispiel - Assembly Scheme



415 mm

835 mm

	Z	α	T/mt	Mt
40.510	1.00	160°	100	I
40.515	1.50	160°	100	I
40.520	2.00	150°	100	I
40.525	2.50	140°	100	I



160°

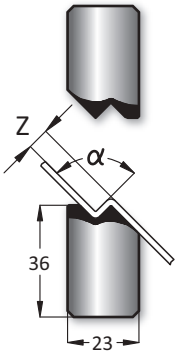
150°

140°

415 mm

835 mm

	Z	α	T/mt	Mt
40.511	1.00	90°	100	I
40.516	1.50	90°	100	I
40.521	2.00	90°	100	I
40.526	2.50	90°	100	I
40.530	3.00	90°	100	I
40.535	3.50	90°	100	I
40.540	4.00	90°	100	I
40.545	4.50	90°	100	I
40.550	5.00	90°	100	I
40.555	5.50	90°	100	I
40.560	6.00	90°	100	I
40.565	6.50	90°	100	I
40.570	7.00	90°	100	I
40.575	7.50	90°	100	I
40.580	8.00	90°	100	I

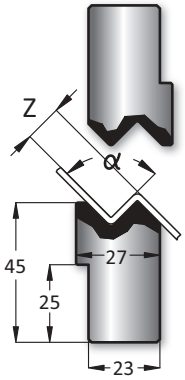


90°

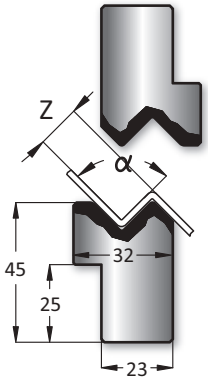
415 mm

835 mm

	Z	α	T/mt	Mt
40.590	9.00	90°	100	I
40.610	10.00	90°	100	I
40.611	11.00	90°	100	I
40.612	12.00	90°	100	I



90°

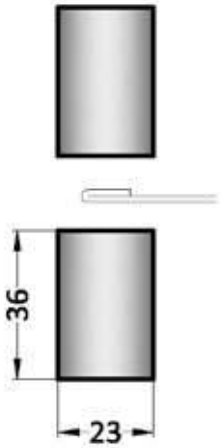


	Z	α	T/mt	Mt
40.613	13.00	90°	100	I
40.614	14.00	90°	100	I
40.615	15.00	90°	100	I

415 mm

835 mm

90°



	Z	α	T/mt	Mt
40.500				I

415 mm

835 mm

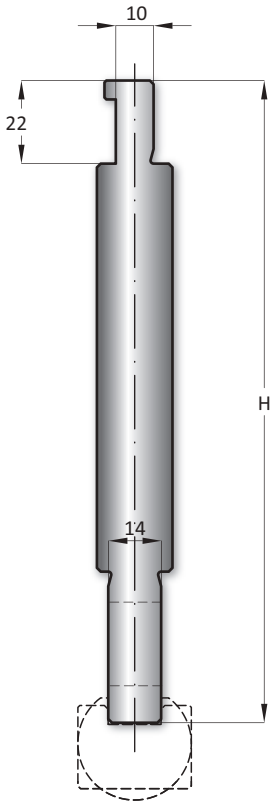
90°

Red Line

	H	T/mt	Mt
16.010	170.00	80	I

412 mm

830 mm

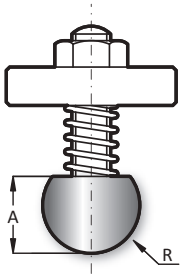


Red Line

415 mm

835 mm

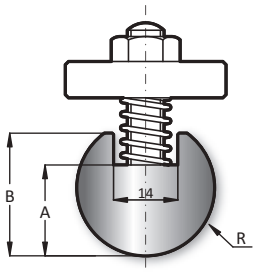
	R	A
10.300	7.00	11.50
10.301	7.50	11.50
10.302	8.00	13.00
10.303	9.00	16.00
10.304	10.00	16.00
10.305	11.00	16.00
10.306	11.50	19.00
10.307	12.00	20.00



415 mm

835 mm

	R	A	B
10.308	12.50	16.00	21.00
10.309	13.00	17.00	23.00
10.310	14.00	19.00	25.00
10.311	15.00	20.00	27.00
10.312	16.00	21.00	28.00
10.313	17.00	21.50	31.50
10.314	17.50	22.00	32.00
10.315	19.00	25.00	32.00
10.316	20.00	24.00	34.00
10.317	22.50	25.00	33.00
10.318	25.00	29.00	39.00
10.319	27.50	34.00	44.00
10.320	30.00	34.00	44.00
10.321	35.00	45.00	55.00
10.322	40.00	45.00	55.00
10.323	45.00	50.00	60.00
10.324	50.00	54.00	64.00

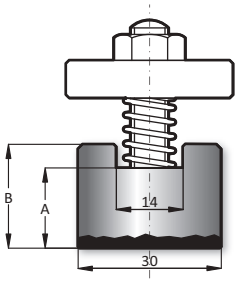


Red Line

415 mm

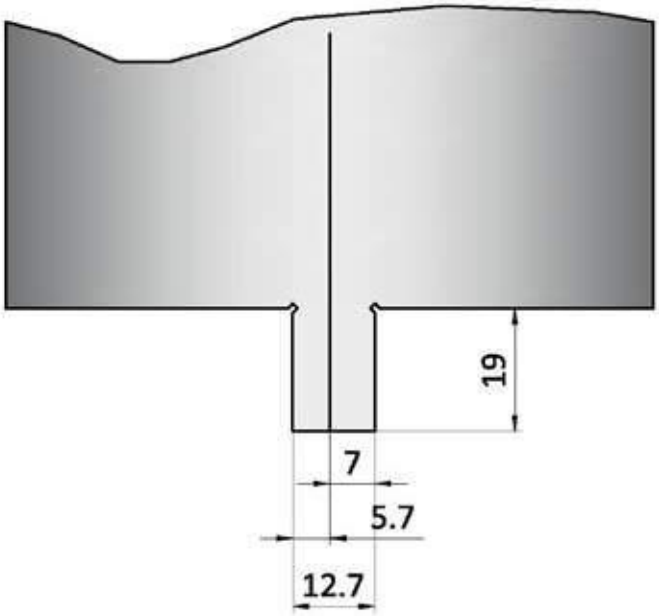
835 mm

	A	B
10.325	17.00	22.00



Westermann24 liefert
Ihnen Lösungen für
Halter mit Einsatz.
(S. 163)

Red Line L



direkt einsetzbar auf Abkantpressen von:
LVD

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Unterwerkzeuge:
UW 550mm sektioniert in : 25,25,30,35,40,45,50,100,200mm

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden.
(siehe Seite 161)

directly able to work on bending presses of:
LVD

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

design:
All radii are grinded and hardened

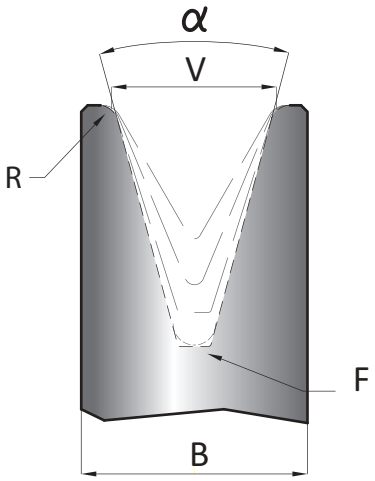
length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

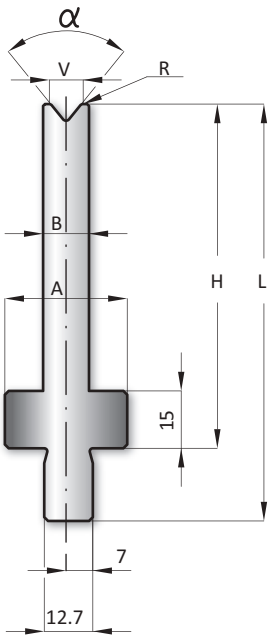
tool sets divided into sections:
Lower tool:
UW 550mm sectioned in : 25,25,30,35,40,45,50,100,200mm

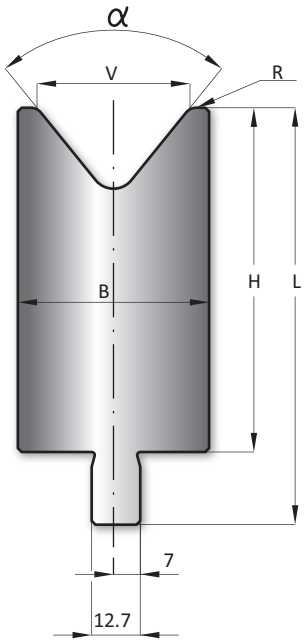
loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

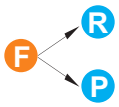
508 mm

550 mm









78°	V	B	A	R	H	L	T/mt	Mt
26.706	6	12	32	0,8	90	109	40	I
26.708	8	12	32	1,0	90	109	40	I
26.710	10	14	32	1,2	90	109	50	I
26.712	12	18	32	1,5	90	109	60	I
26.716	16	25	32	2,0	90	109	80	I
26.720	20	32	/	2,5	90	109	80	I
26.724	24	32	/	3,0	90	109	100	I
26.730	30	40	/	3,0	90	109	100	I
26.740	40	50	/	3,5	90	109	100	I
26.750	50	70	/	4,0	90	109	100	I
26.760	60	70	/	5,0	90	109	100	I
26.780	80	95	/	6,0	90	109	100	I
26.794	100	120	/	8,0	90	109	100	I
26.797	120	140	/	10,0	130	149	100	I

60°	V	H
2.09.224	16	90
2.09.225	20	90
2.09.226	24	90
2.09.227	30	90
2.09.228	35	90
2.09.229	40	90
2.09.230	50	90
2.09.231	60	90
2.09.232	80	90
2.09.233	100	110
2.09.234	120	130

30°	V	B	A	R	H	L	T/mt	Mt
26.306	6	16	32	0,8	90	109	40	III
26.308	8	18	32	1,0	90	109	35	III
26.310	10	25	32	1,2	90	109	40	III
26.321	12	25	32	1,5	90	109	40	III
26.316	16	32	/	2,0	90	109	50	III
26.320	20	40	/	2,5	90	109	60	III
26.324	24	45	/	3,0	90	109	60	III
2.09.221	30							
2.09.222	35							
2.09.223	40							

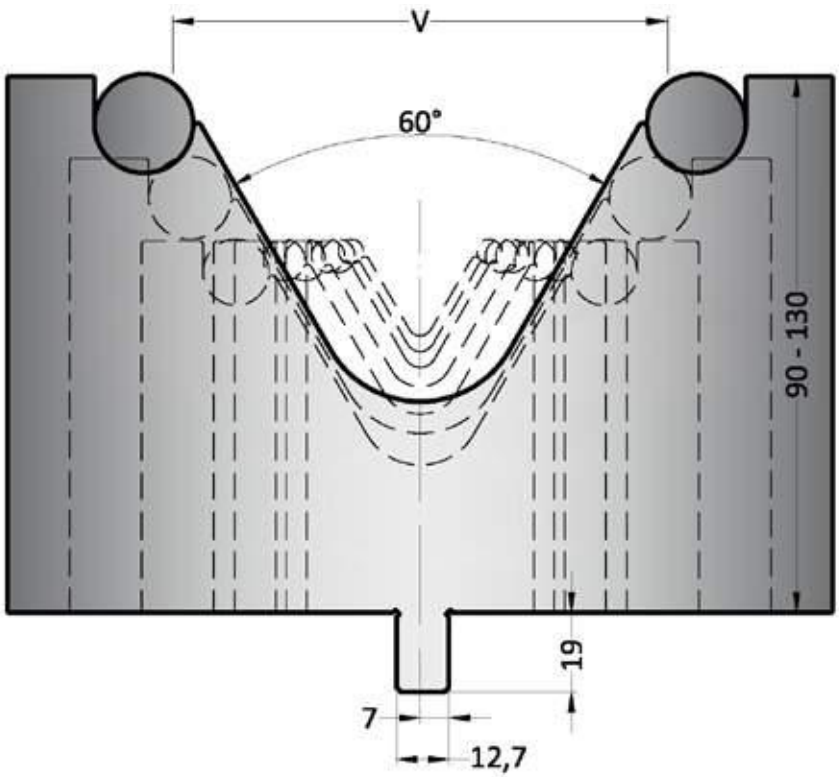
78°

60°

30°

Legende - Legend	Technik - technique
F = Nutgrund - ground of the groove	
R = radius	
P = flach - flat	

Red Line

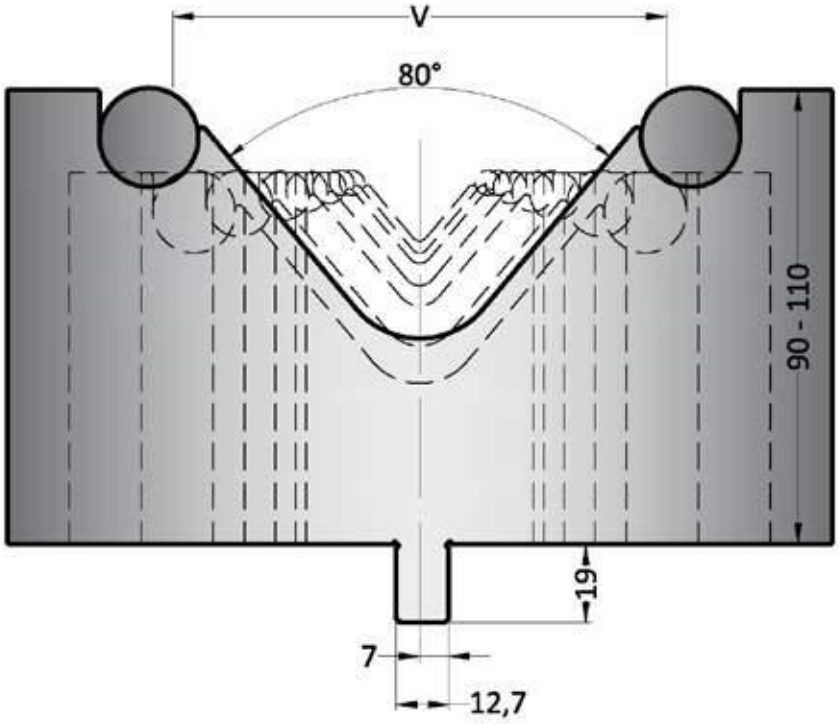


	V	α	H
2.24.011	30	60°	99.00
2.24.012	35	60°	99.00
2.24.013	40	60°	99.00
2.24.014	50	60°	99.00
2.24.015	60	60°	99.00
2.24.016	80	60°	99.00
2.24.017	100	60°	110.00
2.24.018	120	60°	130.00

Westermann 24 liefert Ihnen Matrizen mit Welleneinsatz. (S. 162)

Westermann-LVD - mit Einlaufwellen 60°

60°

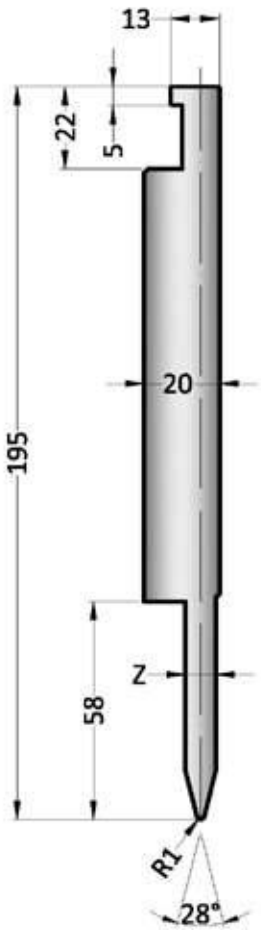


	V	α	H
2.24.011	30	80°	90.00
2.24.012	35	80°	90.00
2.24.013	50	80°	90.00
2.24.014	60	80°	90.00
2.24.015	80	80°	90.00
2.24.016	100	80°	90.00
2.24.017	120	80°	110.00

Westermann-LVD - mit Einlaufwellen 80°

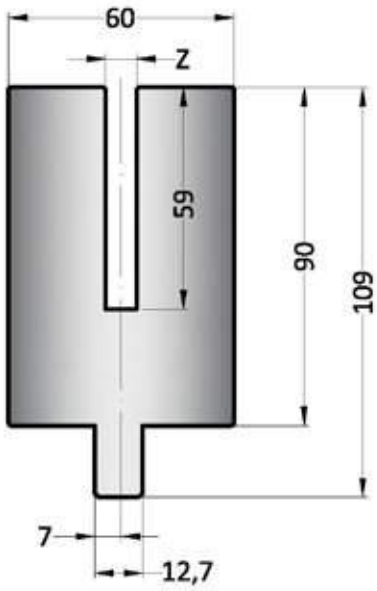
80°

	α	R	Z	H
1.09.063	28°	1.00	8	195.00
1.09.064	28°	1.00	10	195.00
1.09.065	28°	1.00	12	195.00



28°

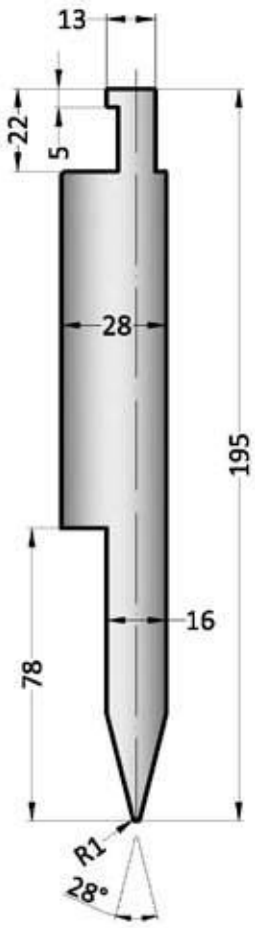
	Z	H
2.09.246	8,2	90.00
2.09.247	10,2	90.00
2.09.248	12,2	90.00



Red Line

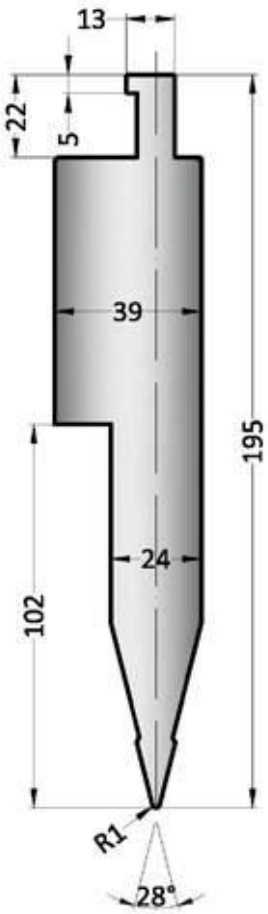
Red Line

1.09.066



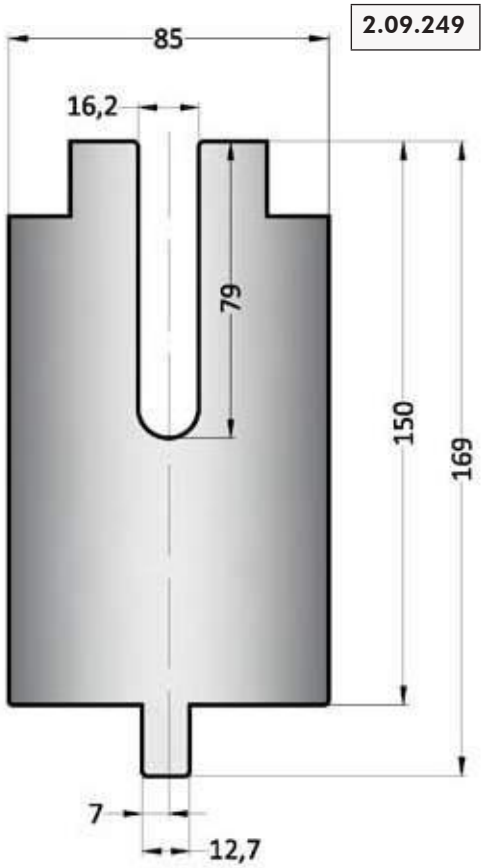
28°

1.09.067

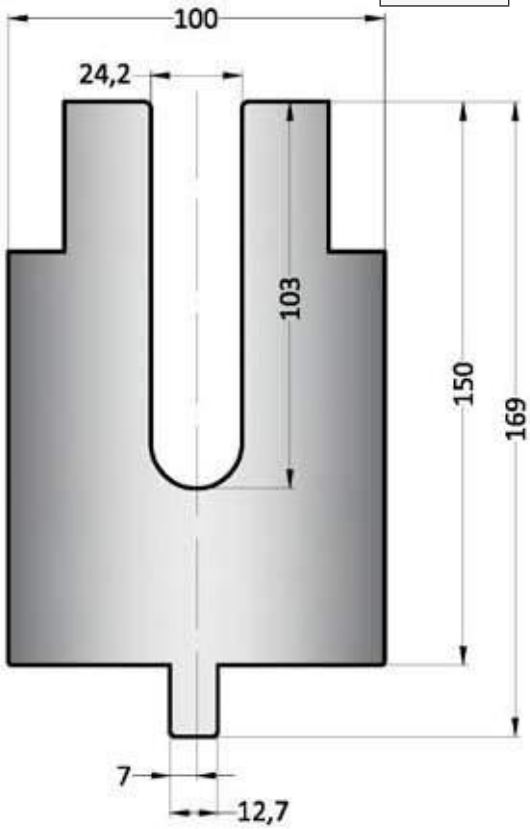


28°

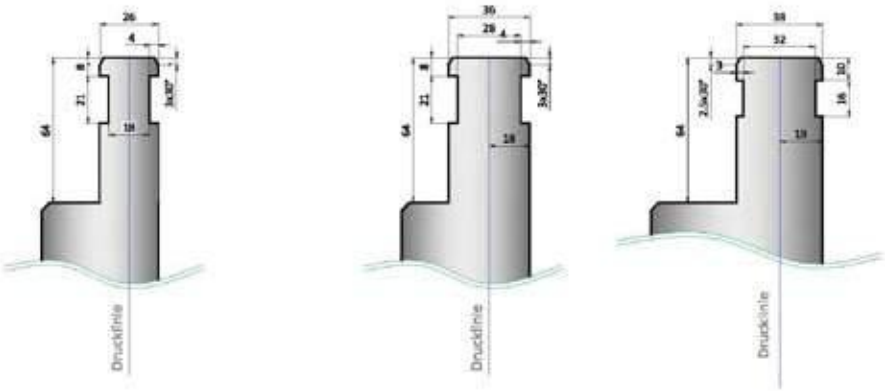
2.09.249



2.09.250



Red Line E



direkt einsetzbar auf Abkantpressen von:
EHT

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Oberwerkzeuge:
OW 1050mm sektioniert in : 45,50,55,60,65,70,75,80,85,90,175,100 Horn links, 100 Horn rechts

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden.
(siehe Seite 161)

directly able to work on bending presses of:
EHT

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

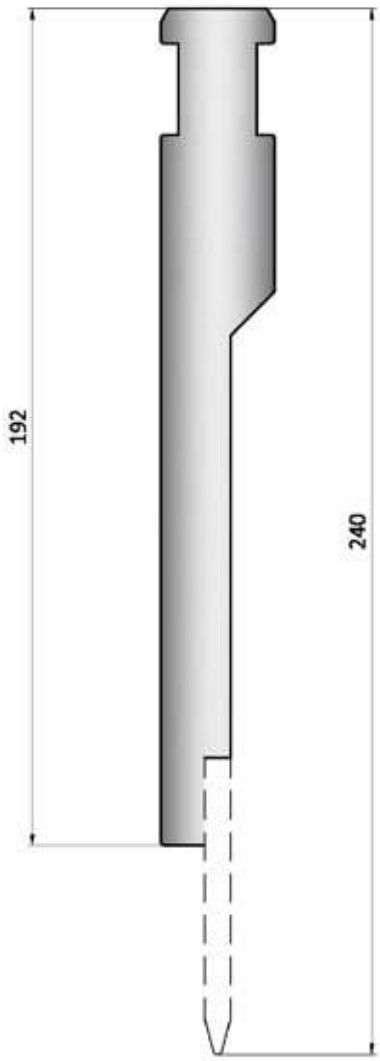
design:
All radii are grinded and hardened

length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

tool sets divided into sections:
Upper tool:
OW 1050mm sectioned in : 45,50,55,60,65,70,75,80,85,90,175,100 horn left, 100 horn right

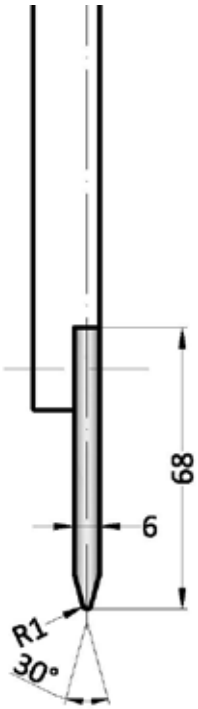
loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

1.05.100



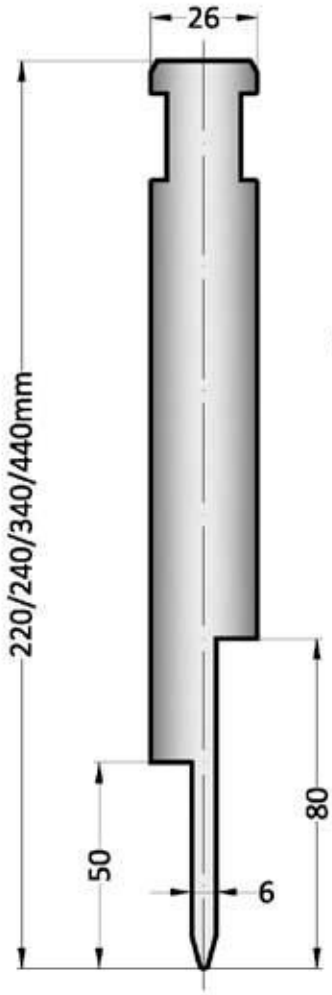
Westermann24 entwickelt für Sie die richtige Werkzeugform für Ihr Produkt. (S. 161)

1.05.120



30°

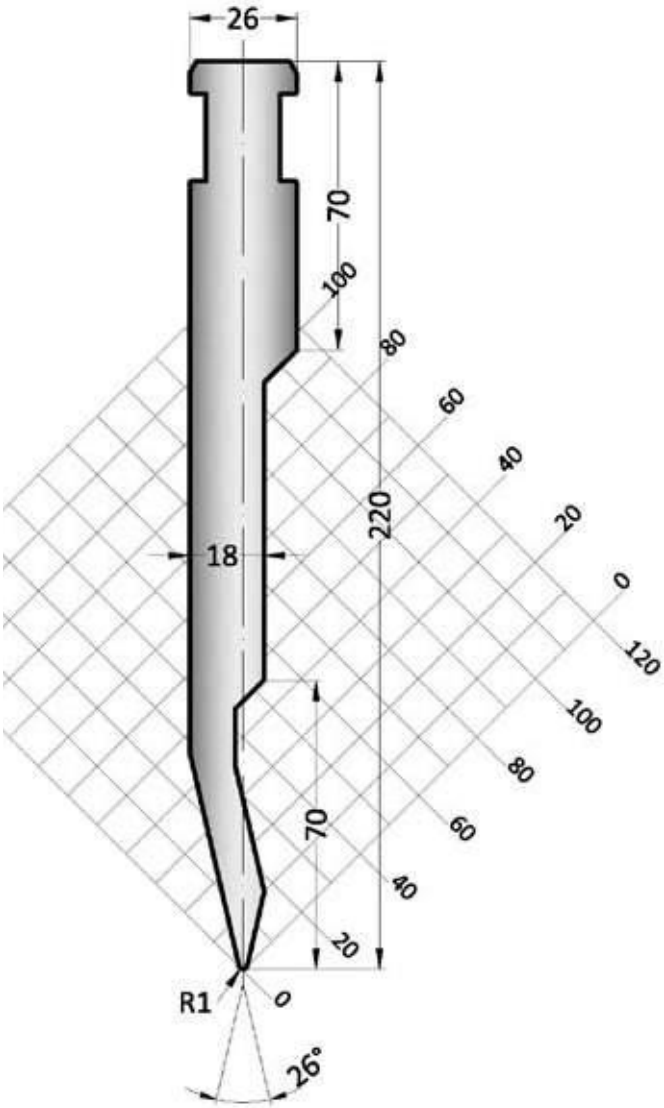
1.05.132



Form einteilig

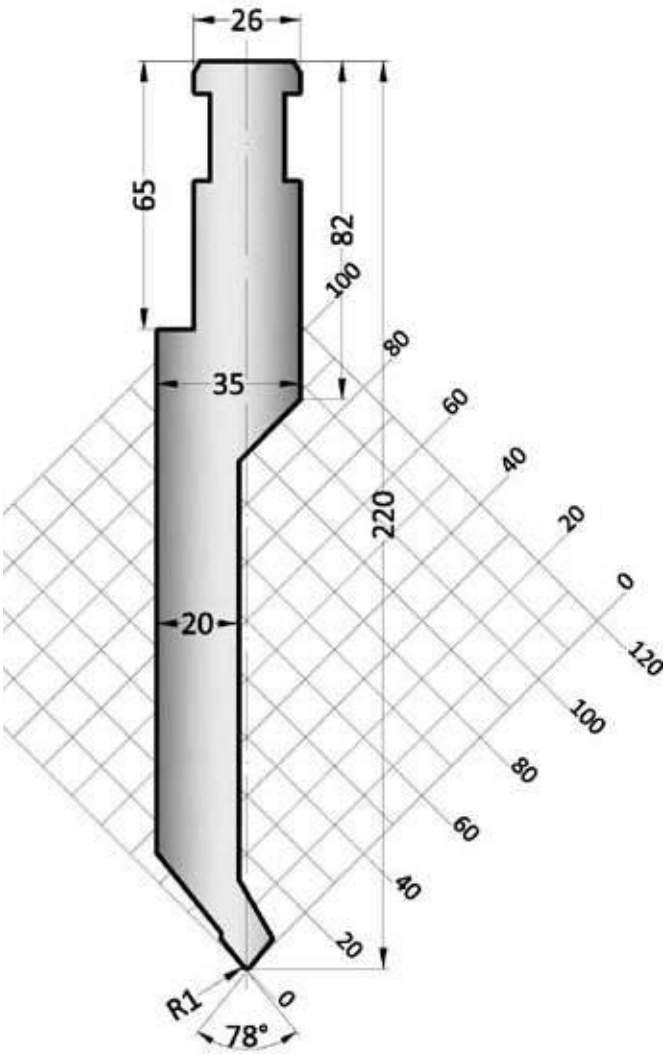
30°

1.05.010



26°

1.05.070

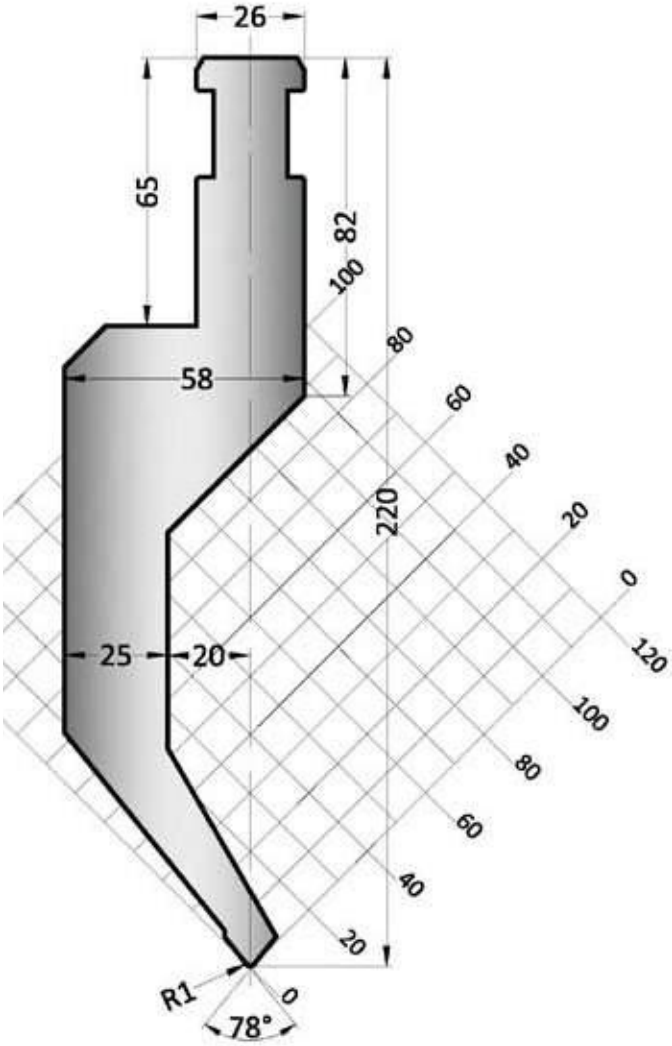


78°

Red Line

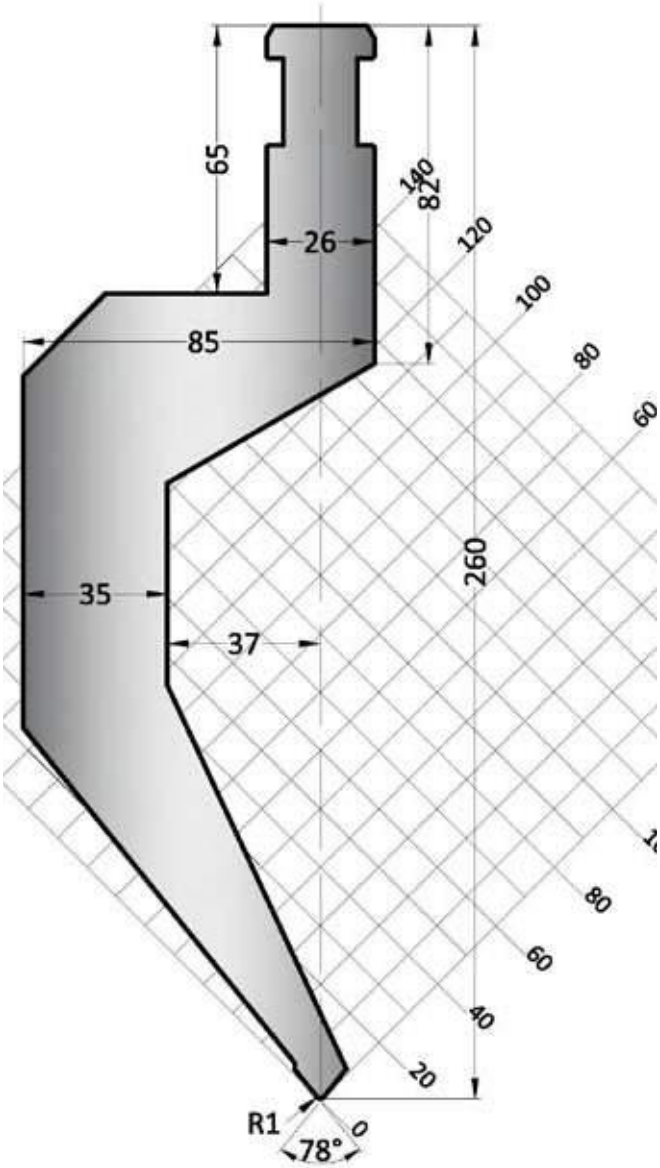
Red Line

1.05.040



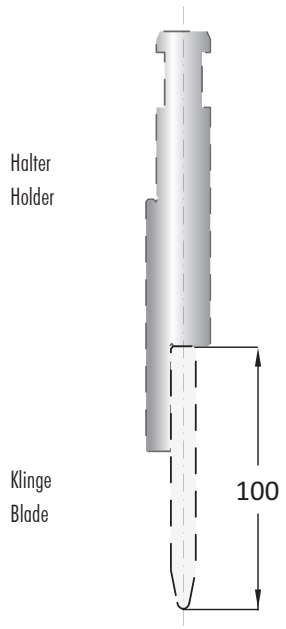
78°

1.05.133



78°

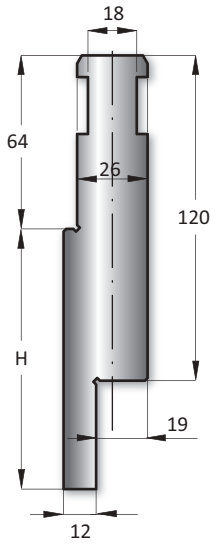
Montagebeispiel - Assembly Scheme



	H	Mt
17.070	78.00	I

500 mm

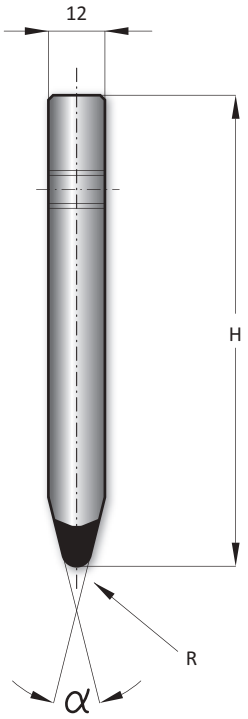
550 mm



100 mm

500 mm

550 mm



	α	R	H	T/mt	Mt
15.776	86°	1.00	100	100	III
15.774	84°	1.00	100	100	III
15.769	28°	6.00	100	100	III
15.768	28°	5.00	100	100	III
15.767	28°	4.00	100	100	III
15.766	28°	3.00	100	100	III
15.765	28°	2.00	100	100	III
15.763	28°	1.00	100	100	III
15.761	28°	0.50	100	100	III

86°

84°

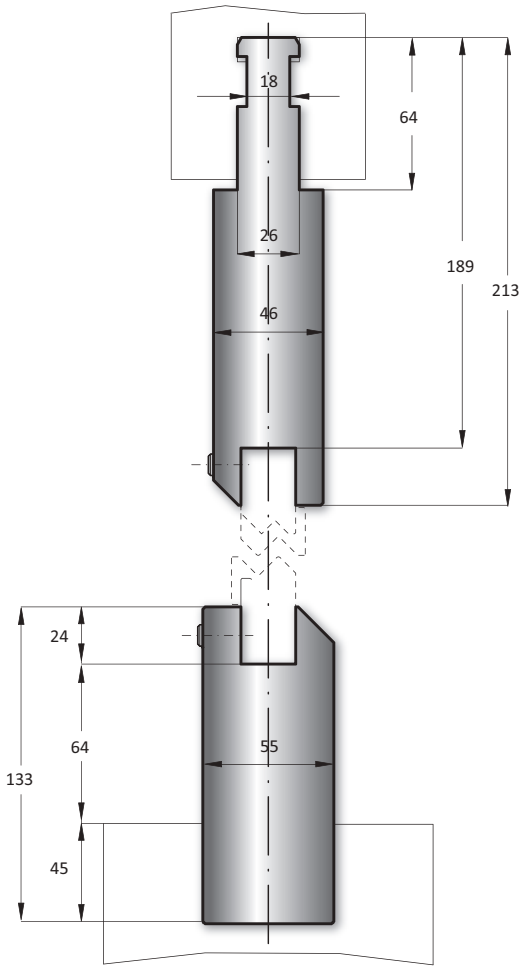
28°

Red Line

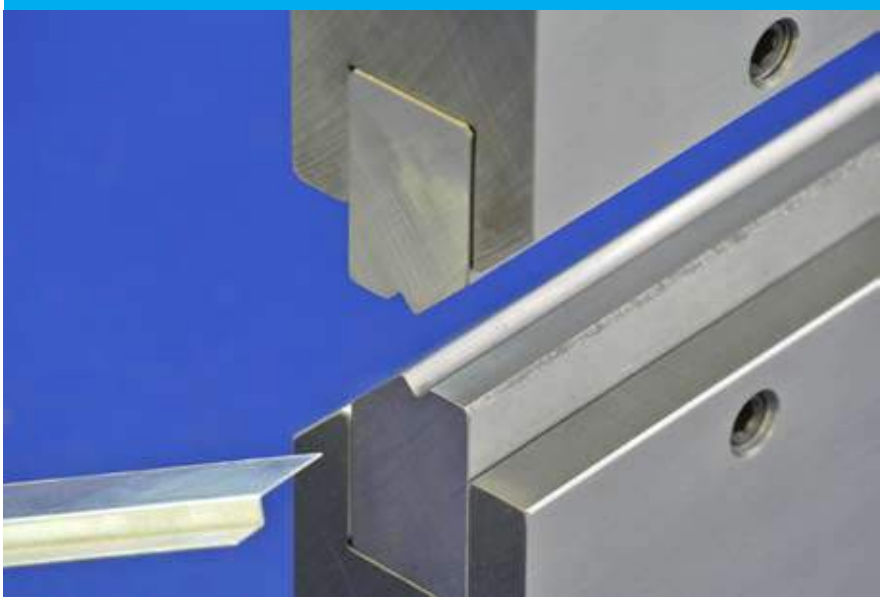
	T/mt	Mt
17.050	100	I

415 mm

835 mm



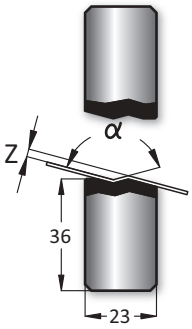
Montagebeispiel - Assembly Scheme



415 mm

835 mm

	Z	α	T/mt	Mt
40.510	1.00	160°	100	I
40.515	1.50	160°	100	I
40.520	2.00	150°	100	I
40.525	2.50	140°	100	I



160°

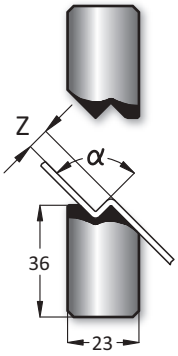
150°

140°

415 mm

835 mm

	Z	α	T/mt	Mt
40.511	1.00	90°	100	I
40.516	1.50	90°	100	I
40.521	2.00	90°	100	I
40.526	2.50	90°	100	I
40.530	3.00	90°	100	I
40.535	3.50	90°	100	I
40.540	4.00	90°	100	I
40.545	4.50	90°	100	I
40.550	5.00	90°	100	I
40.555	5.50	90°	100	I
40.560	6.00	90°	100	I
40.565	6.50	90°	100	I
40.570	7.00	90°	100	I
40.575	7.50	90°	100	I
40.580	8.00	90°	100	I

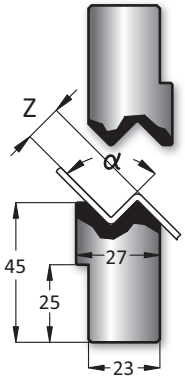


90°

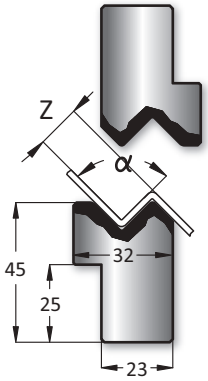
415 mm

835 mm

	Z	α	T/mt	Mt
40.590	9.00	90°	100	I
40.610	10.00	90°	100	I
40.611	11.00	90°	100	I
40.612	12.00	90°	100	I



90°

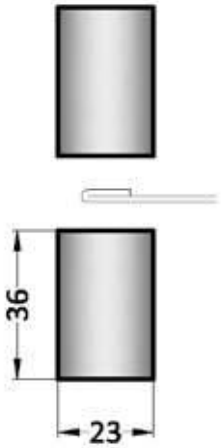


	Z	α	T/mt	Mt
40.613	13.00	90°	100	I
40.614	14.00	90°	100	I
40.615	15.00	90°	100	I

415 mm

835 mm

90°



	Z	α	T/mt	Mt
40.500				I

415 mm

835 mm

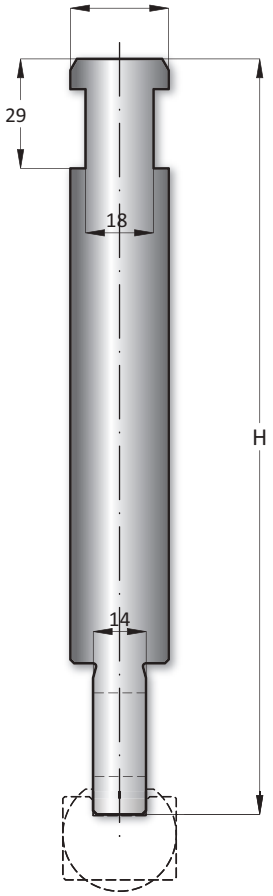
90°

Red Line

	H	T/mt	Mt
17.010	200.00	80	I

412 mm

830 mm

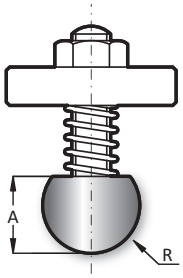


Red Line

415 mm

835 mm

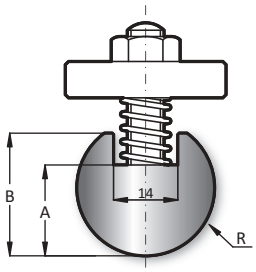
	R	A
10.300	7.00	11.50
10.301	7.50	11.50
10.302	8.00	13.00
10.303	9.00	16.00
10.304	10.00	16.00
10.305	11.00	16.00
10.306	11.50	19.00
10.307	12.00	20.00



415 mm

835 mm

	R	A	B
10.308	12.50	16.00	21.00
10.309	13.00	17.00	23.00
10.310	14.00	19.00	25.00
10.311	15.00	20.00	27.00
10.312	16.00	21.00	28.00
10.313	17.00	21.50	31.50
10.314	17.50	22.00	32.00
10.315	19.00	25.00	32.00
10.316	20.00	24.00	34.00
10.317	22.50	25.00	33.00
10.318	25.00	29.00	39.00
10.319	27.50	34.00	44.00
10.320	30.00	34.00	44.00
10.321	35.00	45.00	55.00
10.322	40.00	45.00	55.00
10.323	45.00	50.00	60.00
10.324	50.00	54.00	64.00

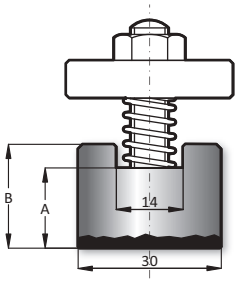


Red Line

415 mm

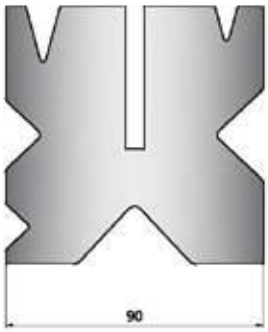
835 mm

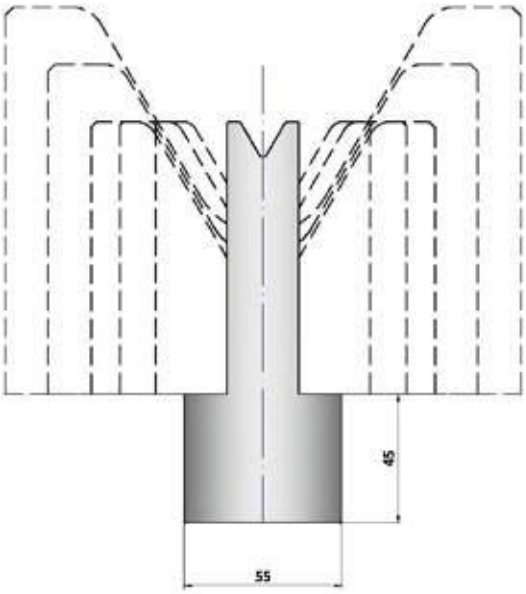
	A	B
10.325	17.00	22.00



Westermann24 liefert
Ihnen Lösungen für
Halter mit Einsatz.
(S. 163)

Red Line E





direkt einsetzbar auf Abkantpressen von:
EHT

directly able to work on bending presses of:
EHT

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Unterwerkzeuge:
UW 1050mm sektioniert in : 45,50,55,60,65,70,75,80,85,90,175,100,100mm

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden.
(siehe Seite 161)

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

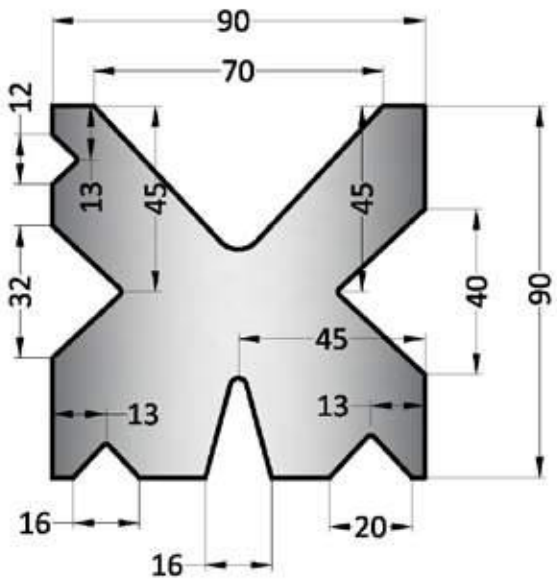
design:
All radii are grinded and hardened

length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

tool sets divided into sections:
Lower tool:
UW 1050mm sektioniert in : 45,50,55,60,65,70,75,80,85,90,175,100,100mm

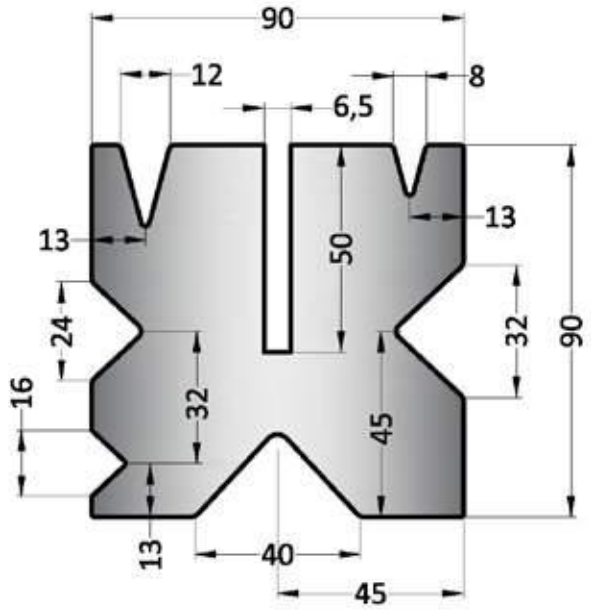
loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

2.05.009



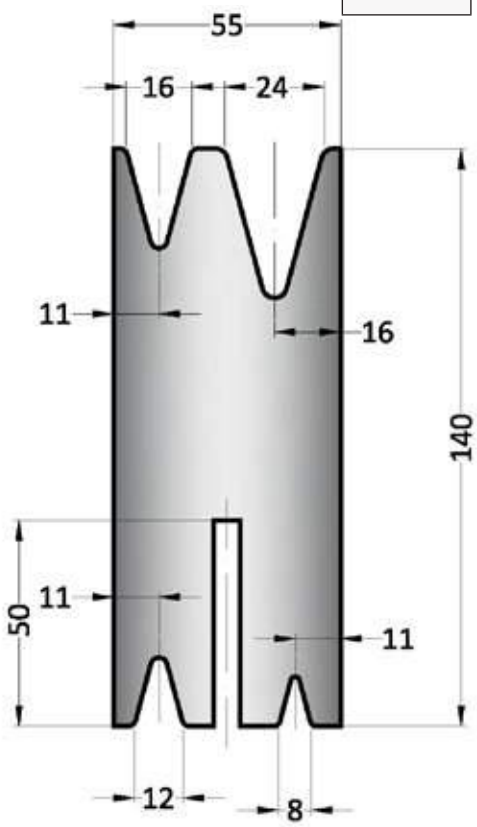
Nicht bemaßte Winkel = 30° / 86°

2.05.010



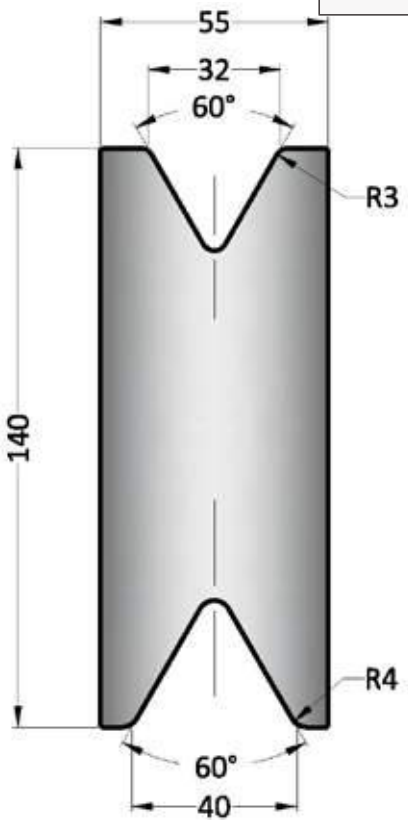
Nicht bemaßte Winkel = 30° / 86°

2.05.180



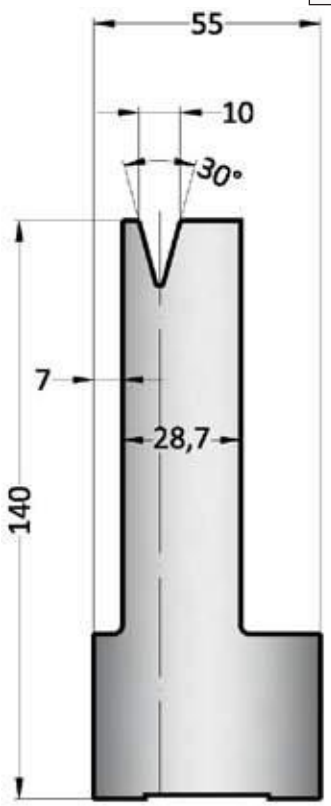
Nicht bemaßte Winkel = 30°

2.05.060

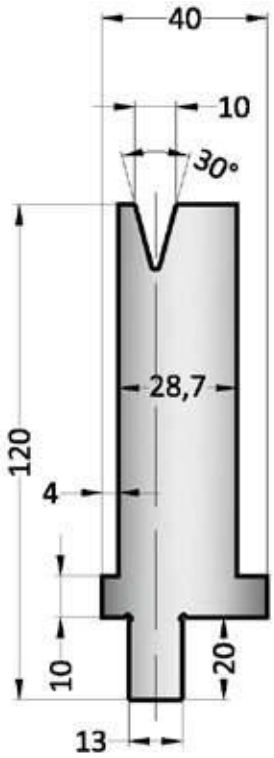


Red Line

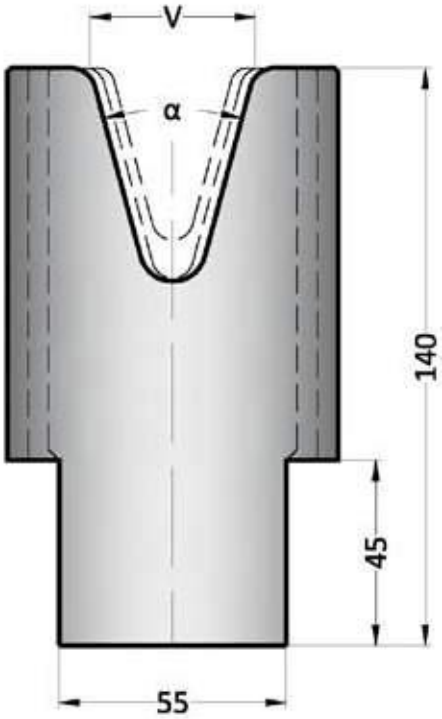
2.05.090



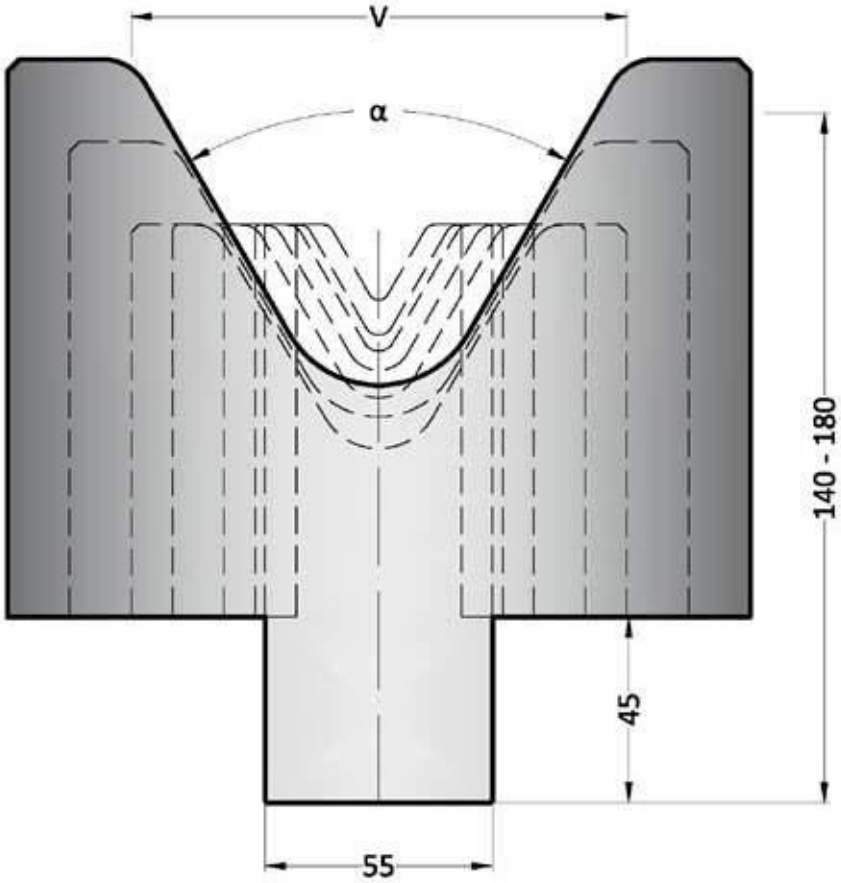
2.05.120



30°	V
2.05.201	30
2.05.202	35
2.05.203	40



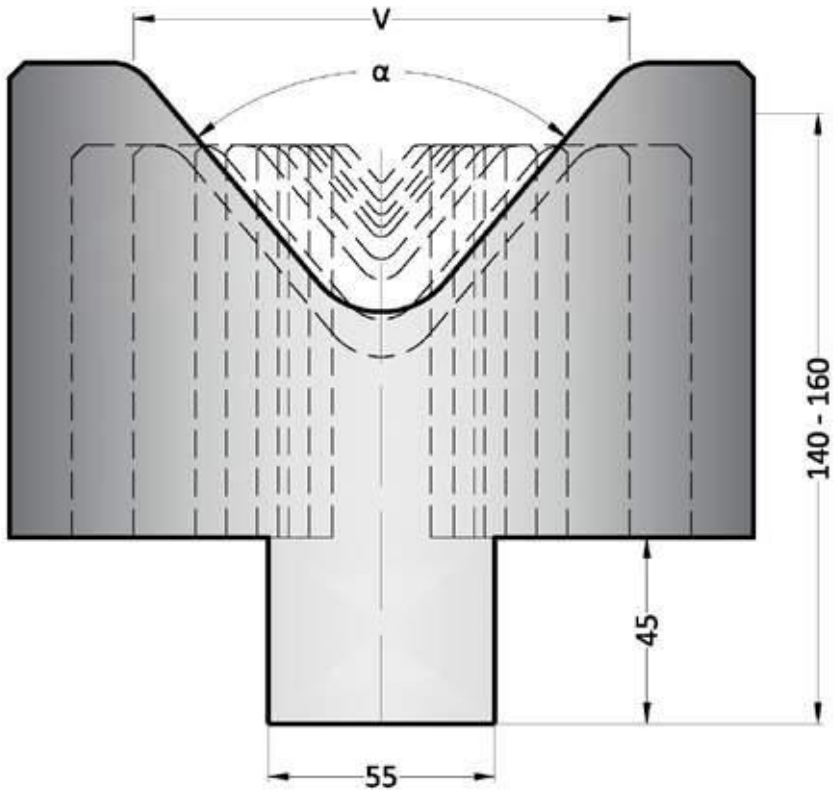
30°



60°	V	H
2.05.204	16	140.00
2.05.205	20	140.00
2.05.206	24	140.00
2.05.207	30	140.00
2.05.208	35	140.00
2.05.209	40	140.00
2.05.210	50	140.00
2.05.211	60	140.00
2.05.212	80	140.00
2.05.213	100	150.00
2.05.214	120	180.00

60°

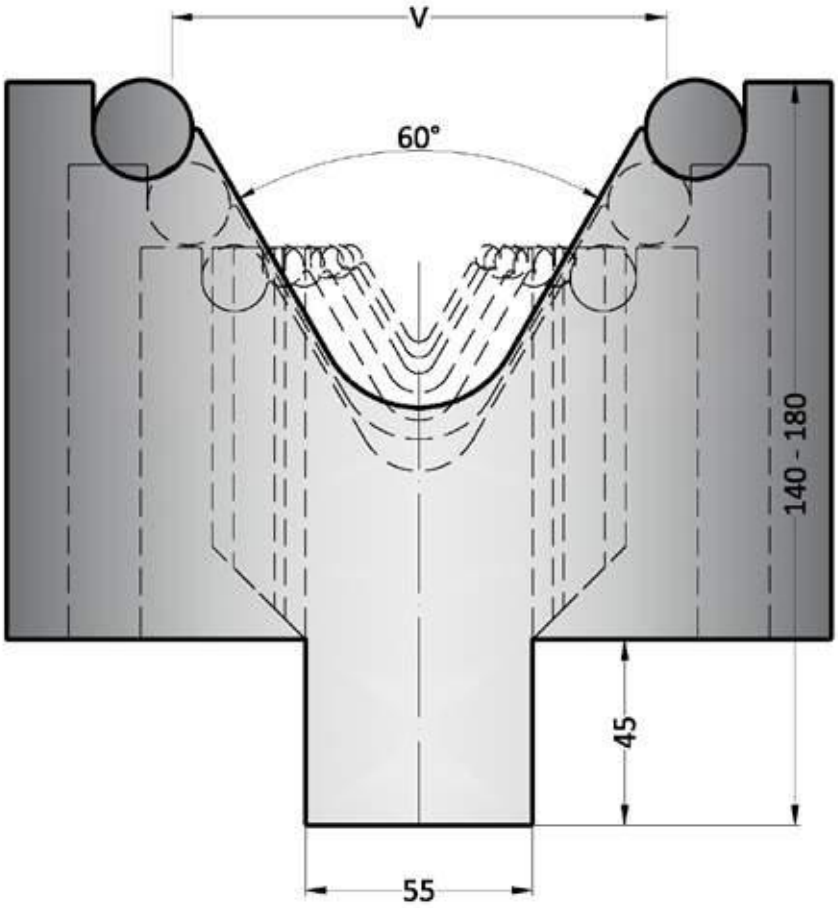
Red Line



80°	V	H
2.05.215	16	140.00
2.05.216	24	140.00
2.05.217	30	140.00
2.05.218	35	140.00
2.05.219	40	140.00
2.05.220	50	140.00
2.05.221	60	140.00
2.05.222	80	140.00
2.05.223	100	140.00
2.05.224	120	160.00

80°

Red Line

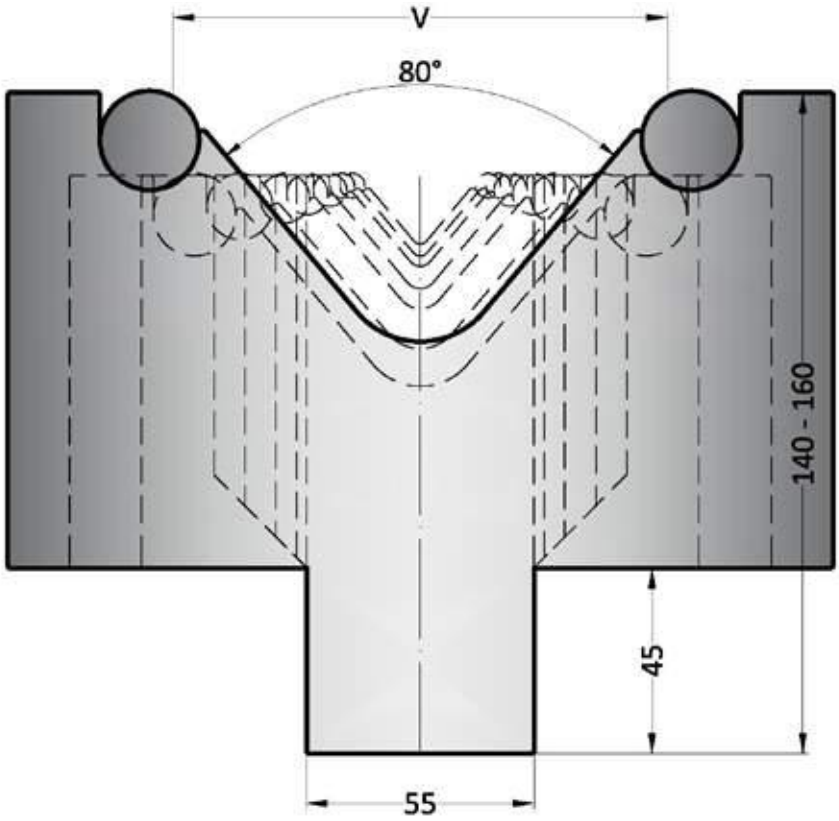


	V	α	H
2.25.011	30	60°	140.00
2.25.012	35	60°	140.00
2.25.013	40	60°	140.00
2.25.014	50	60°	140.00
2.25.015	60	60°	140.00
2.25.016	80	60°	140.00
2.25.017	100	60°	160.00
2.25.018	120	60°	180.00

Westermann-EHT - mit Einlaufwellen 60°

60°

Red Line



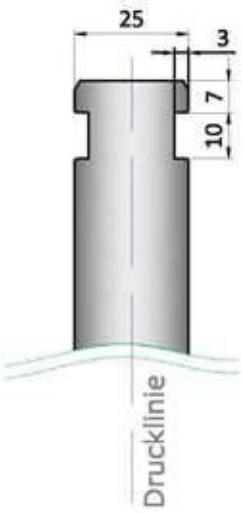
	V	α	H
2.25.019	30	80°	140.00
2.25.020	35	80°	140.00
2.25.021	40	80°	140.00
2.25.022	50	80°	140.00
2.25.023	60	80°	140.00
2.25.024	80	80°	140.00
2.25.025	100	80°	140.00
2.25.026	120	80°	160.00

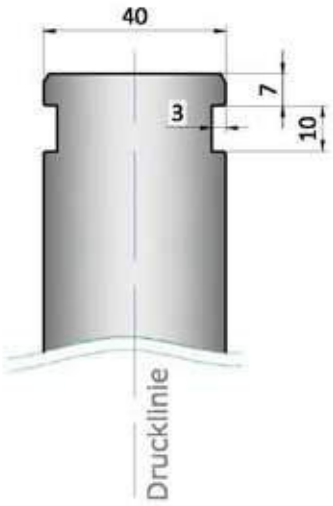
Westermann 24 liefert Ihnen Matrizen mit Welleneinsatz. (S. 162)

Westermann-EHT - mit Einlaufwellen 80°

80°

Red Line W





direkt einsetzbar auf Abkantpressen von:
Weinbrenner

directly able to work on bending presses of:
Weinbrenner

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Oberwerkzeuge:
OW 1250mm sektioniert in : 40,45,50,55,60,60,65,70,75,80,100,100HornL,100Horn R,300mm

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden.
(siehe Seite 161)

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

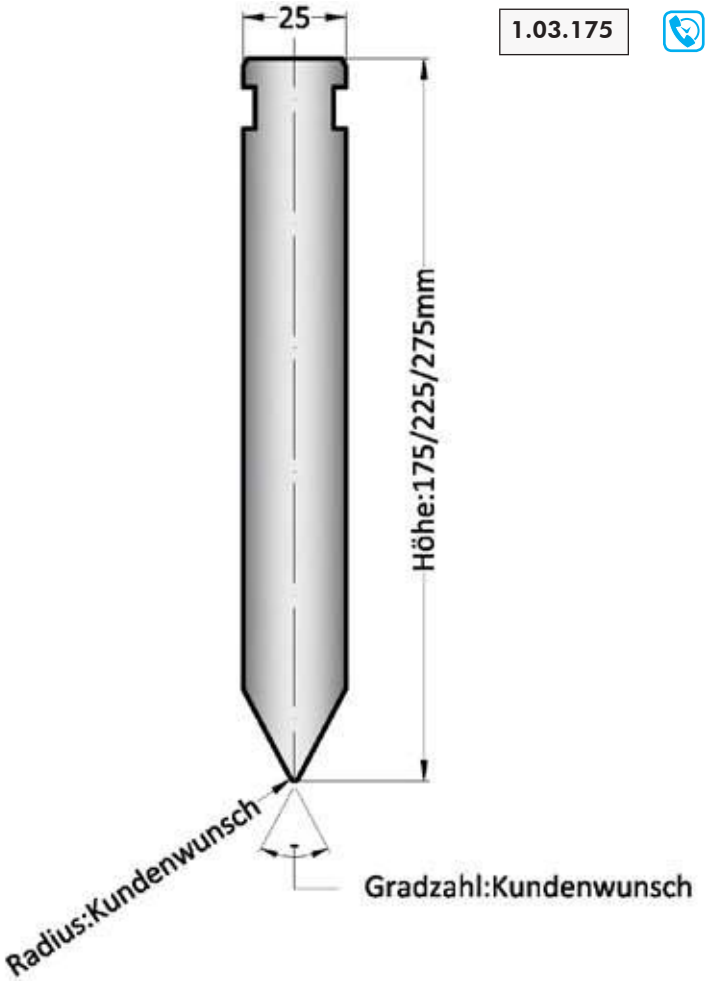
design:
All radii are grinded and hardened

length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

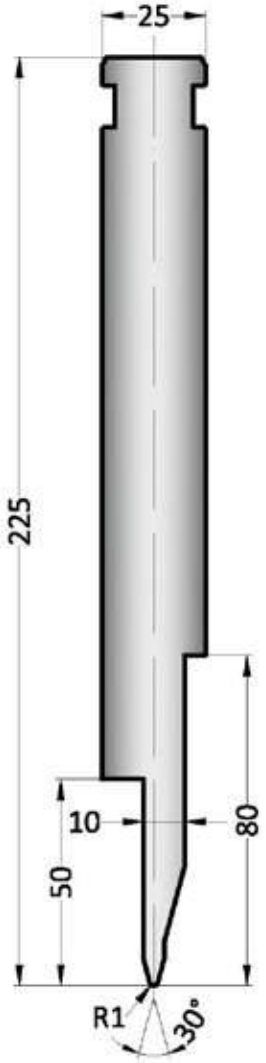
tool sets divided into sections:
Upper tool:
OW 1250mm sectioned in : 40,45,50,55,60,60,65,70,75,80,100,100HornL,100H ornR,300mm

loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

1.03.175

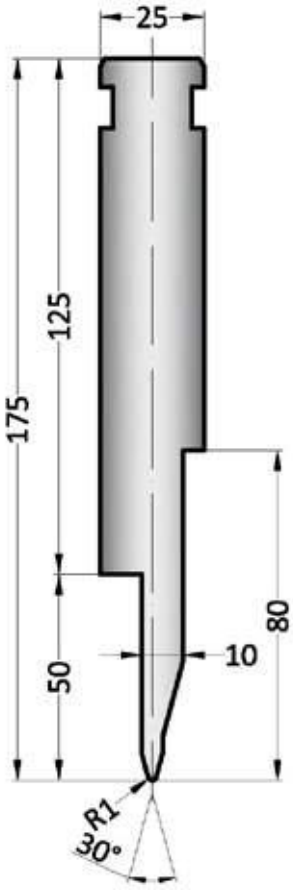


1.03.040



30°

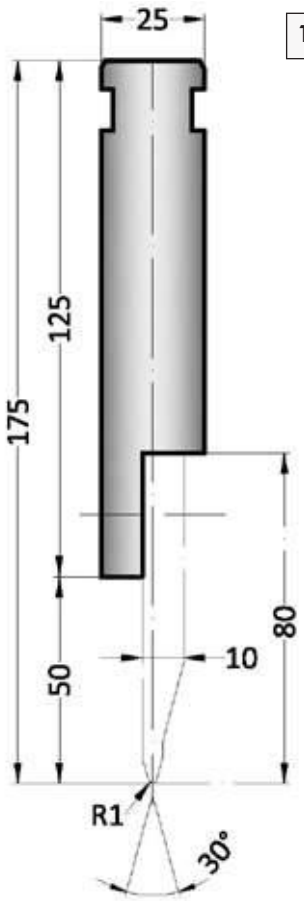
1.03.010



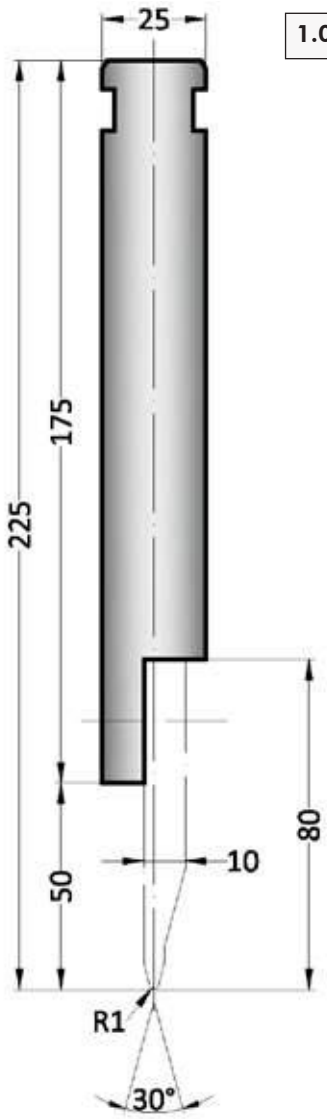
30°

Red Line

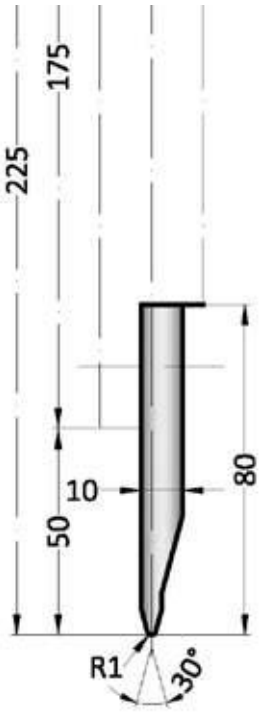
1.03.110



1.03.070

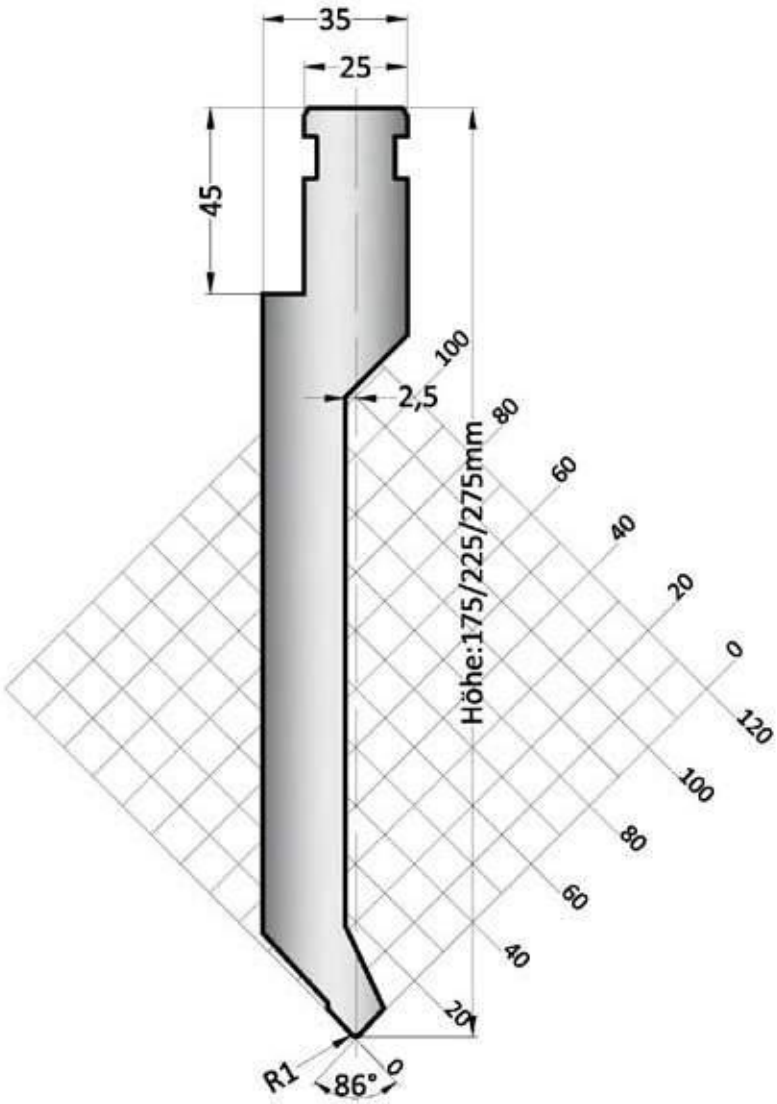


1.03.090



30°

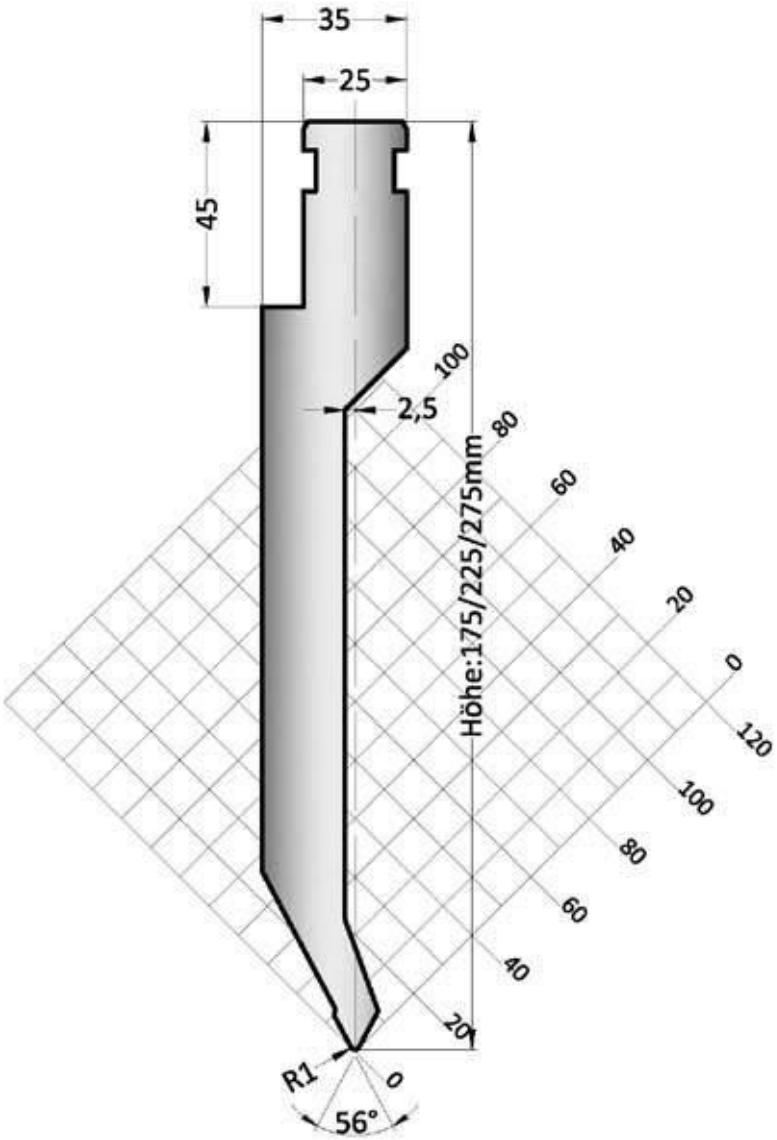
1.03.154



86°

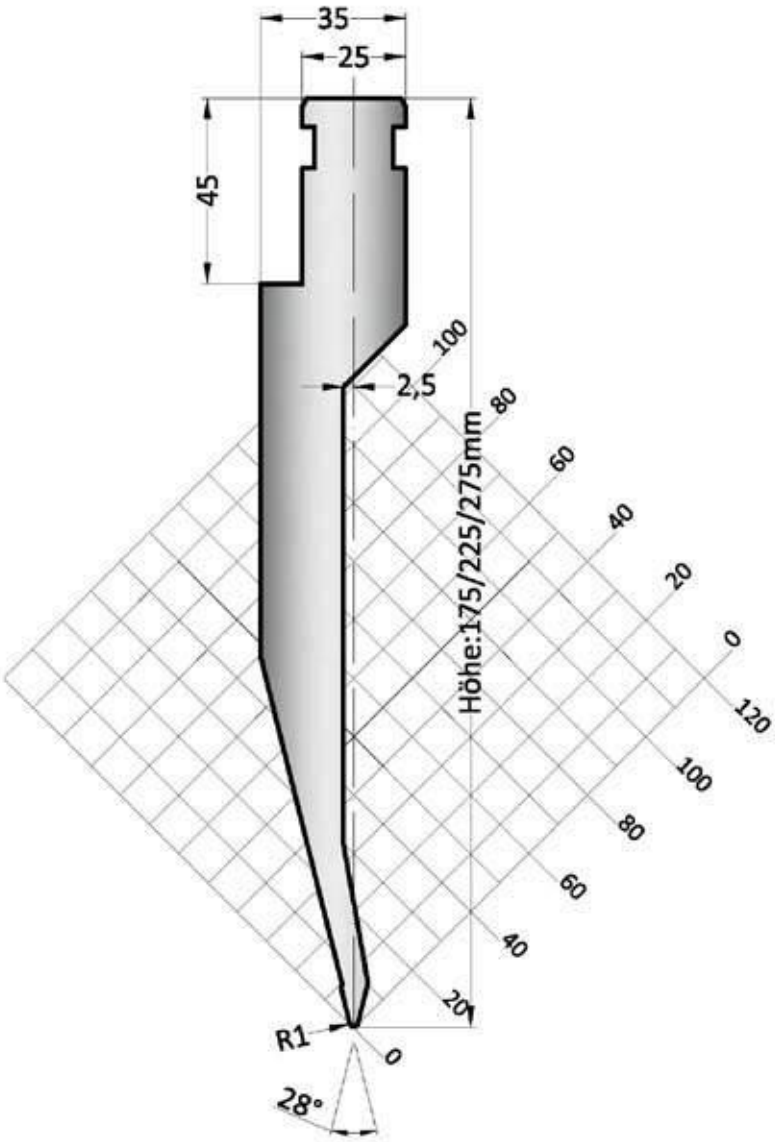
Red Line

1.03.155



56°

1.03.156

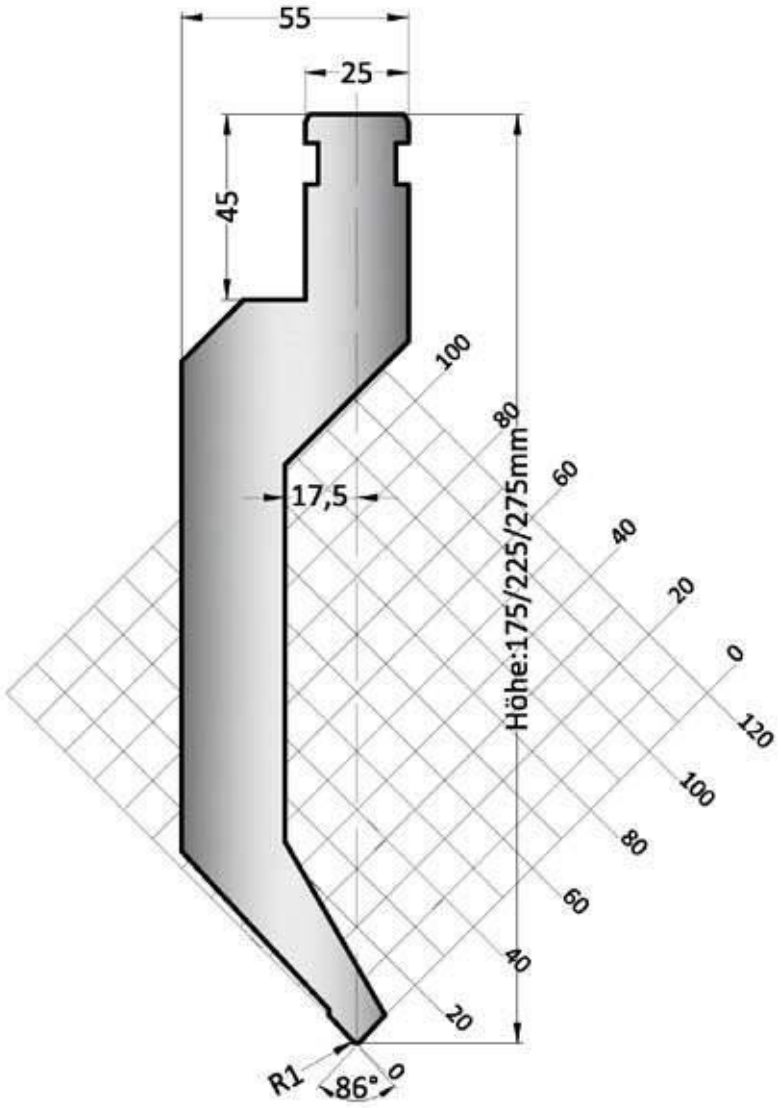


Westermann24 entwickelt für Sie die richtige Werkzeugform für Ihr Produkt. (S. 161)

28°

Red Line

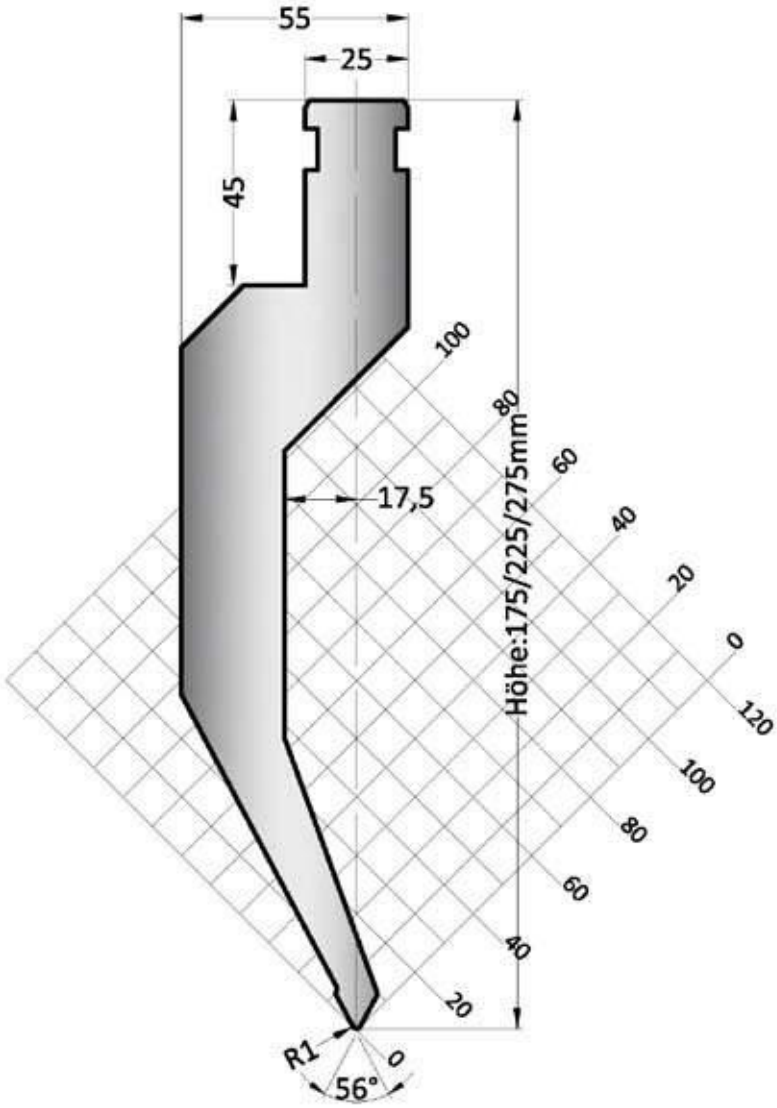
1.03.162



86°

Red Line

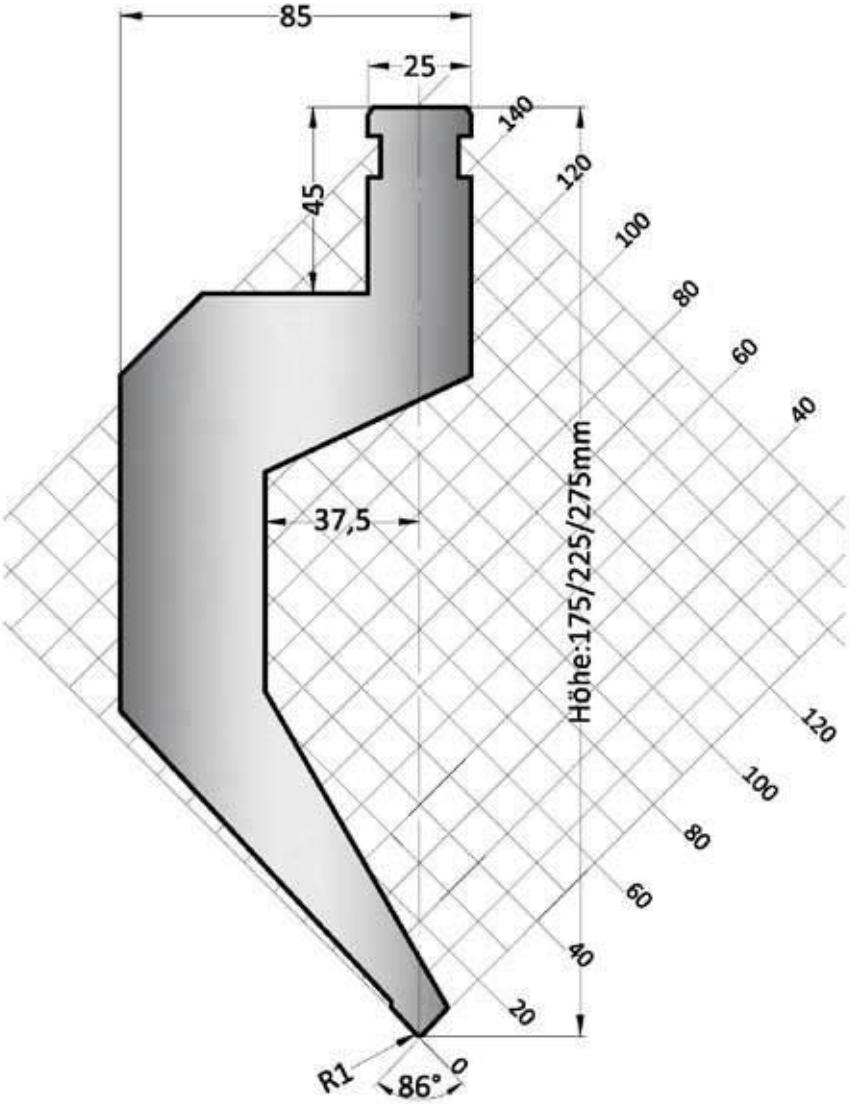
1.03.163



56°

Red Line

1.03.168

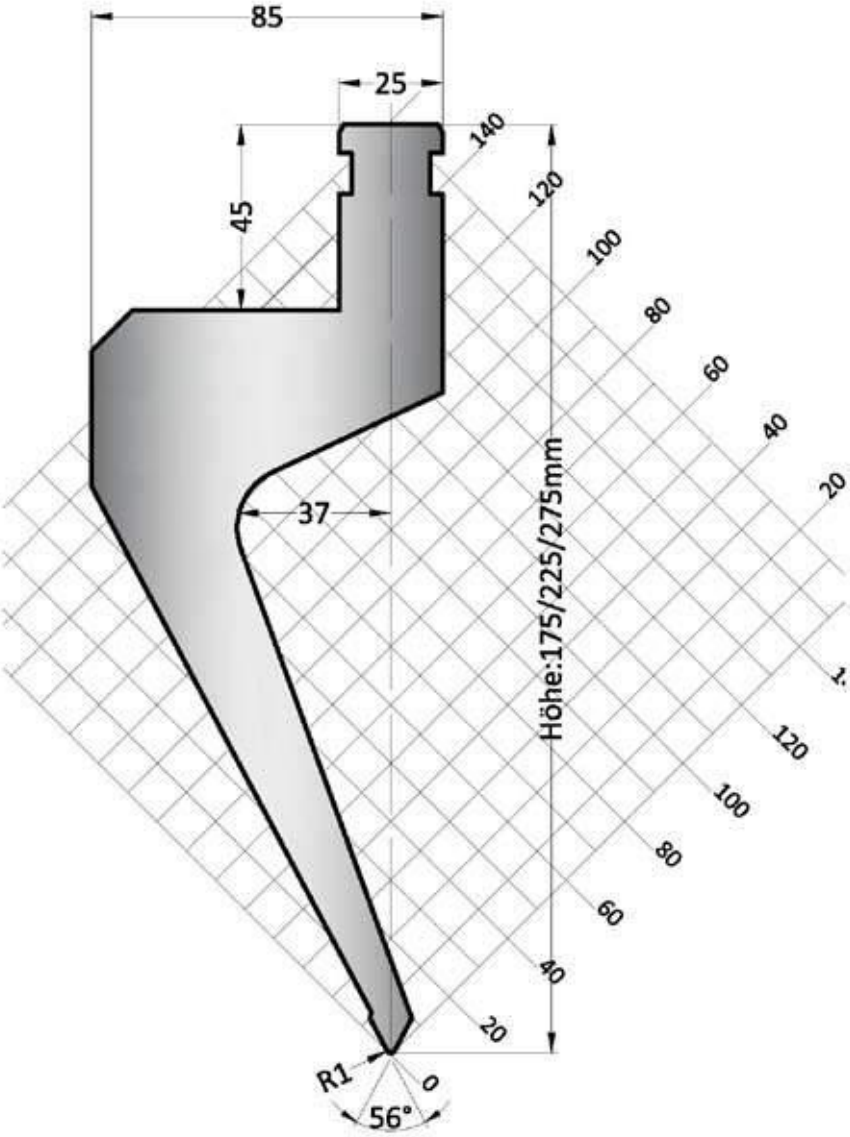


Westermann24 entwickelt für Sie die richtige Werkzeugform für Ihr Produkt. (S. 161)

86°

Red Line

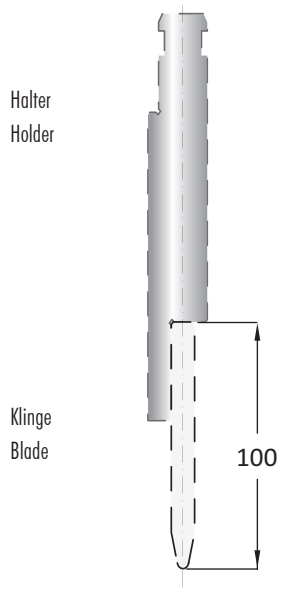
1.03.169



56°

Red Line

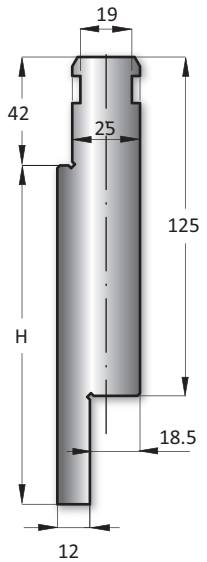
Montagebeispiel - Assembly Scheme



	H	Mt
17.570	90.00	I

500 mm

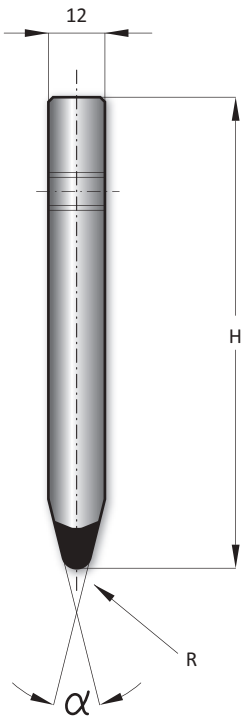
550 mm



100 mm

500 mm

550 mm



	α	R	H	T/mt	Mt
15.776	86°	1.00	100	100	III
15.774	84°	1.00	100	100	III
15.769	28°	6.00	100	100	III
15.768	28°	5.00	100	100	III
15.767	28°	4.00	100	100	III
15.766	28°	3.00	100	100	III
15.765	28°	2.00	100	100	III
15.763	28°	1.00	100	100	III
15.761	28°	0.50	100	100	III

86°

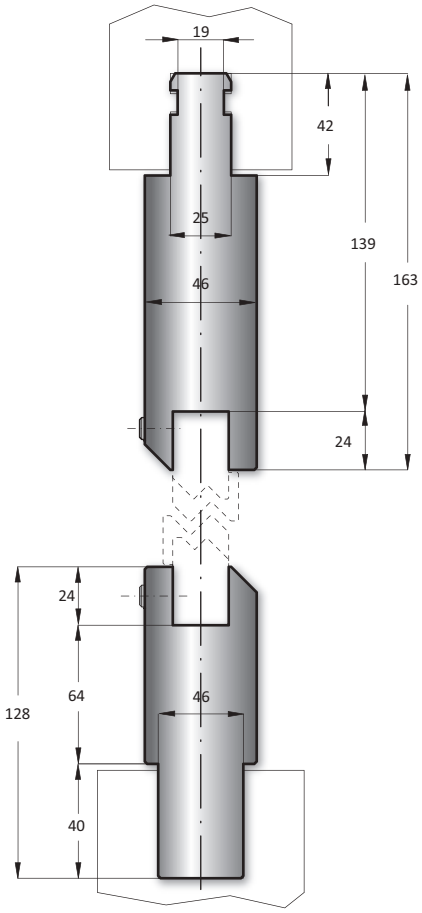
84°

28°

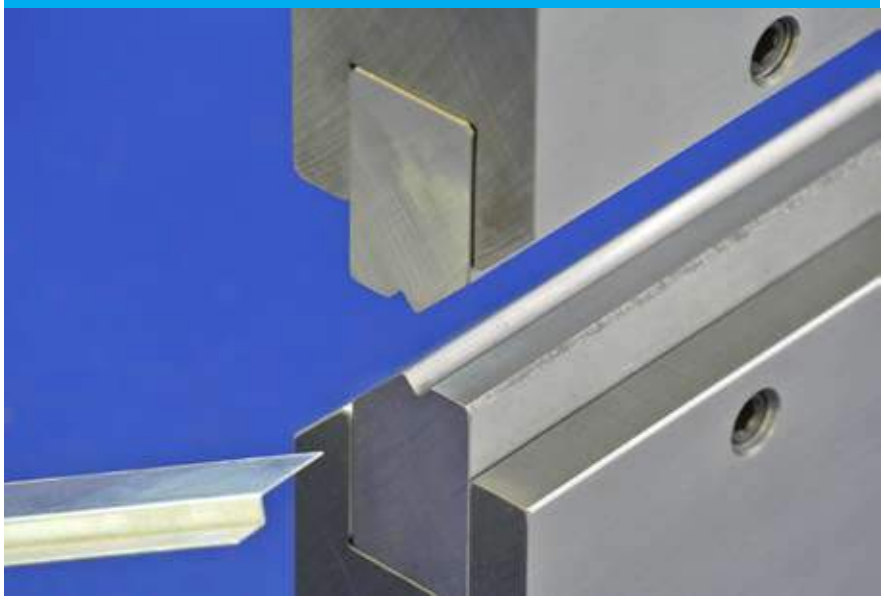
	T/mt	Mt
17.550	100	I

415 mm

835 mm



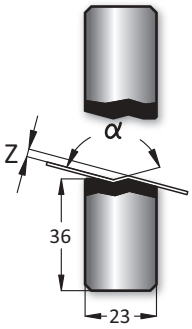
Montagebeispiel - Assembly Scheme



415 mm

835 mm

	Z	α	T/mt	Mt
40.510	1.00	160°	100	I
40.515	1.50	160°	100	I
40.520	2.00	150°	100	I
40.525	2.50	140°	100	I



160°

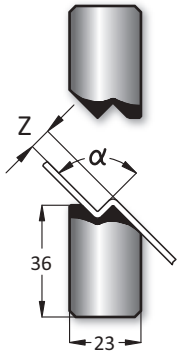
150°

140°

415 mm

835 mm

	Z	α	T/mt	Mt
40.511	1.00	90°	100	I
40.516	1.50	90°	100	I
40.521	2.00	90°	100	I
40.526	2.50	90°	100	I
40.530	3.00	90°	100	I
40.535	3.50	90°	100	I
40.540	4.00	90°	100	I
40.545	4.50	90°	100	I
40.550	5.00	90°	100	I
40.555	5.50	90°	100	I
40.560	6.00	90°	100	I
40.565	6.50	90°	100	I
40.570	7.00	90°	100	I
40.575	7.50	90°	100	I
40.580	8.00	90°	100	I

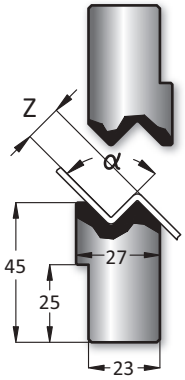


90°

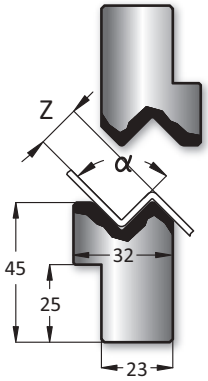
415 mm

835 mm

	Z	α	T/mt	Mt
40.590	9.00	90°	100	I
40.610	10.00	90°	100	I
40.611	11.00	90°	100	I
40.612	12.00	90°	100	I



90°

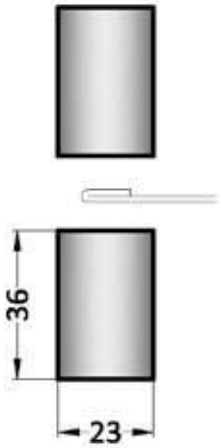


	Z	α	T/mt	Mt
40.613	13.00	90°	100	I
40.614	14.00	90°	100	I
40.615	15.00	90°	100	I

415 mm

835 mm

90°

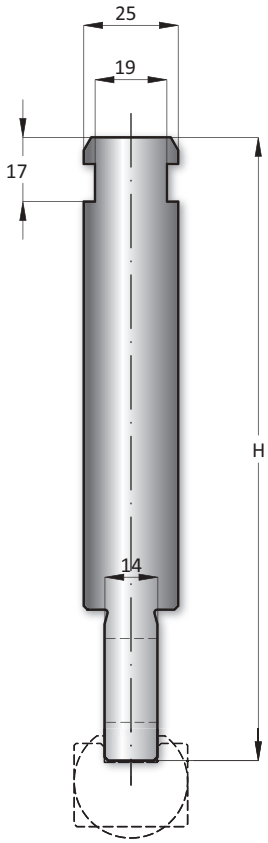


	Z	α	T/mt	Mt
40.500				I

415 mm

835 mm

90°



	H	T/mt	Mt
17.510	165.00	80	I

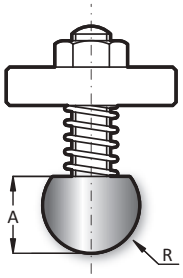
412 mm

830 mm

415 mm

835 mm

	R	A
10.300	7.00	11.50
10.301	7.50	11.50
10.302	8.00	13.00
10.303	9.00	16.00
10.304	10.00	16.00
10.305	11.00	16.00
10.306	11.50	19.00
10.307	12.00	20.00

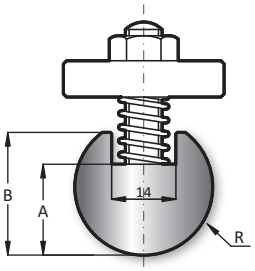


Red Line

415 mm

835 mm

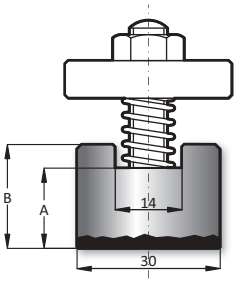
	R	A	B
10.308	12.50	16.00	21.00
10.309	13.00	17.00	23.00
10.310	14.00	19.00	25.00
10.311	15.00	20.00	27.00
10.312	16.00	21.00	28.00
10.313	17.00	21.50	31.50
10.314	17.50	22.00	32.00
10.315	19.00	25.00	32.00
10.316	20.00	24.00	34.00
10.317	22.50	25.00	33.00
10.318	25.00	29.00	39.00
10.319	27.50	34.00	44.00
10.320	30.00	34.00	44.00
10.321	35.00	45.00	55.00
10.322	40.00	45.00	55.00
10.323	45.00	50.00	60.00
10.324	50.00	54.00	64.00



415 mm

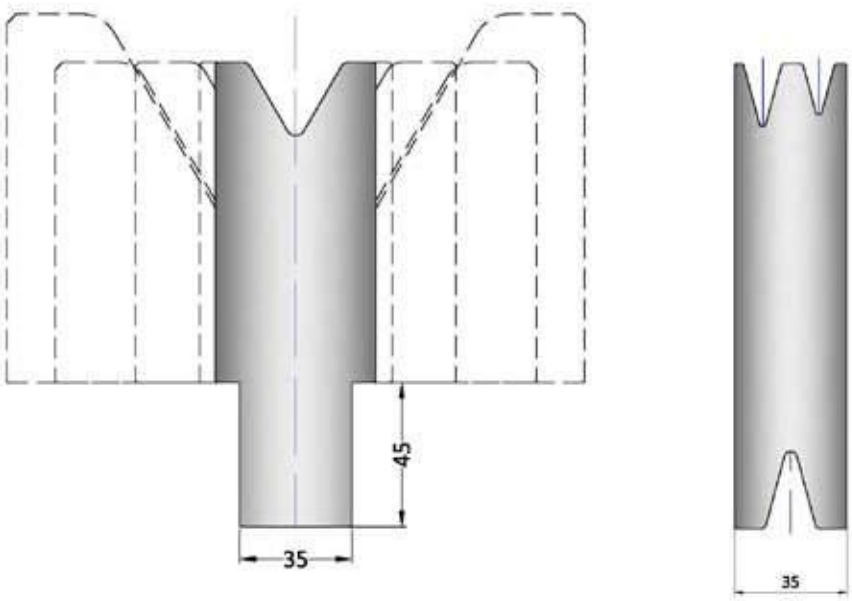
835 mm

	A	B
10.325	17.00	22.00



Westermann24 liefert
Ihnen Lösungen für
Halter mit Einsatz.
(S. 163)

Red Line W



direkt einsetzbar auf Abkantpressen von:
Weinbrenner

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²
- Alternativ: 16MnCr5 Einsatzgehärtet

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Unterwerkzeuge:
UW 1250mm sektioniert in : 40,45,50,55,60,60,65,70,75,80,100,200,300mm

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden.
(siehe Seite 161)

directly able to work on bending presses of:
Weinbrenner

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²
- Alternatively: 16MnCr5, case hardened

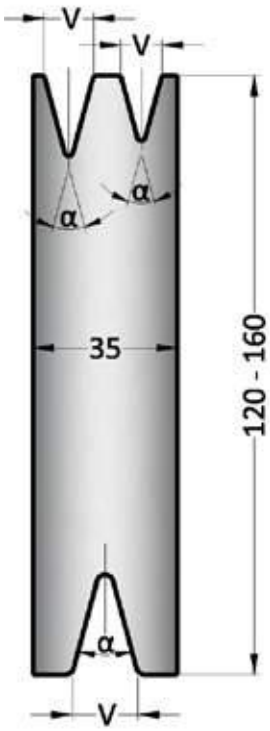
design:
All radii are grinded and hardened

length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

tool sets divided into sections:
Lower tool:
UW 1250mm sectioned in : 40,45,50,55,60,60,65,70,75,80,100,200,300mm

loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

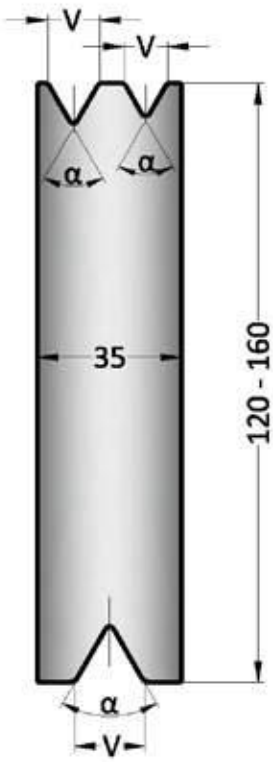
	V	α	H
2.15.070	z.B. 8, 12, 20	30°	120.00
2.15.120	z.B. 8, 12, 20	60°	120.00
2.15.121	z.B. 8, 12, 20	86°	120.00



86°
60°
30°

Westermann-WB

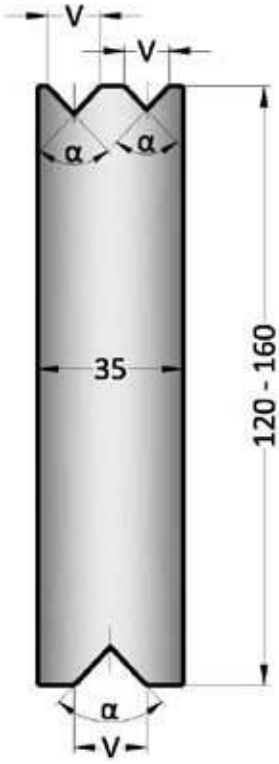
	V	α	H
2.16.125	z.B. 8, 12, 20	30°	145.00
2.16.126	z.B. 8, 12, 20	60°	145.00
2.16.127	z.B. 8, 12, 20	86°	145.00



86°
60°
30°

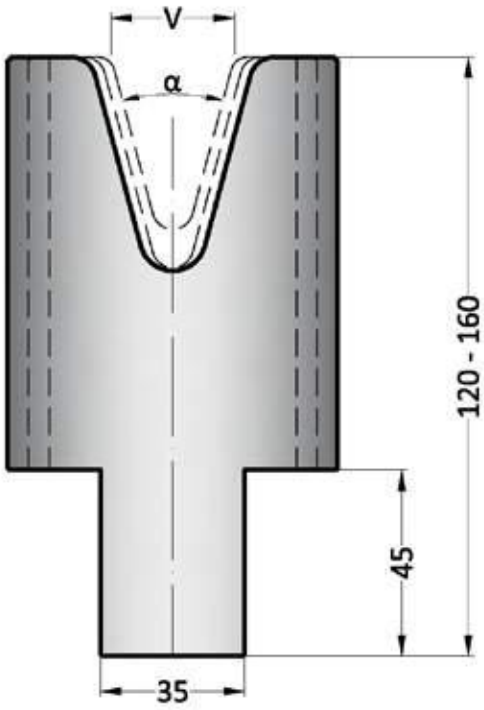
Westermann-WB

	V	α	H
2.17.035	z.B. 8, 12, 20	30°	160.00
2.17.036	z.B. 8, 12, 20	60°	160.00
2.17.034	z.B. 8, 12, 20	86°	160.00



86°
60°
30°

Westermann-WB



Westermann-WB

30°	V	H
2.15.100	30	120.00
2.15.101	35	120.00
2.15.102	40	120.00

30°	V	H
2.16.100	30	145.00
2.16.101	35	145.00
2.16.102	40	145.00

30°	V	H
2.17.010	30	160.00
2.17.011	35	160.00
2.17.012	40	160.00

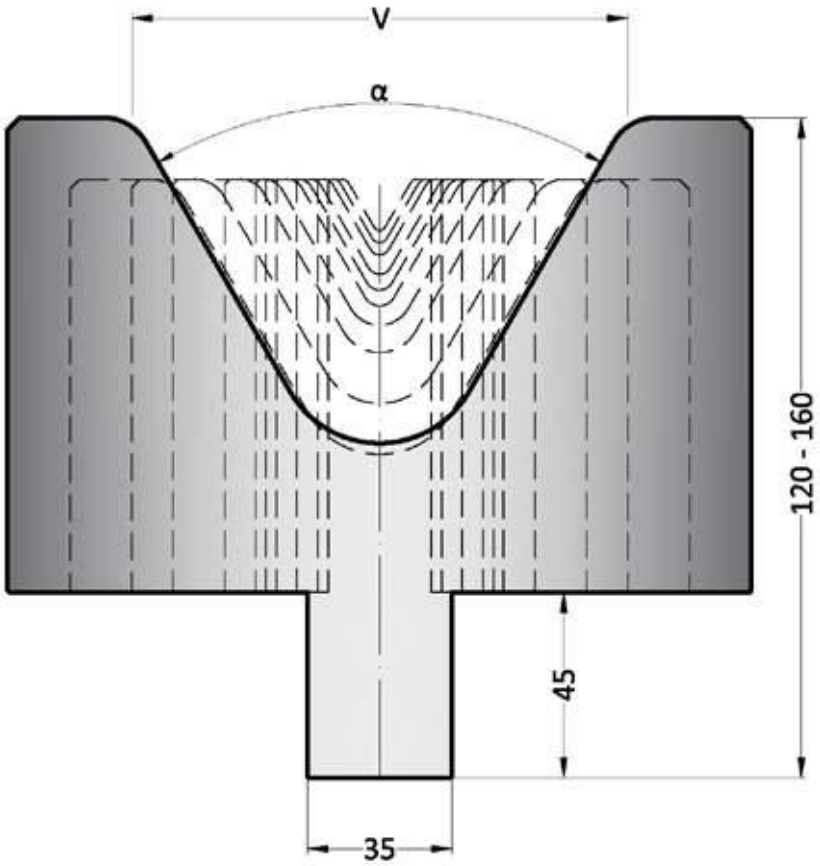
30°

Red Line

60°	V	H
2.15.105	24	120.00
2.15.106	30	120.00
2.15.107	35	120.00
2.15.108	4	120.00
2.15.109	50	120.00
2.15.110	60	120.00

60°	V	H
2.16.105	24	145.00
2.16.106	30	145.00
2.16.107	35	145.00
2.16.108	40	145.00
2.16.109	50	145.00
2.16.110	60	145.00
2.16.111	80	145.00
2.16.112	100	145.00

60°	V	H
2.17.015	24	160.00
2.17.016	30	160.00
2.17.017	35	160.00
2.17.018	40	160.00
2.17.019	50	160.00
2.17.020	60	160.00
2.17.021	80	160.00
2.17.022	100	160.00
2.17.023	120	160.00



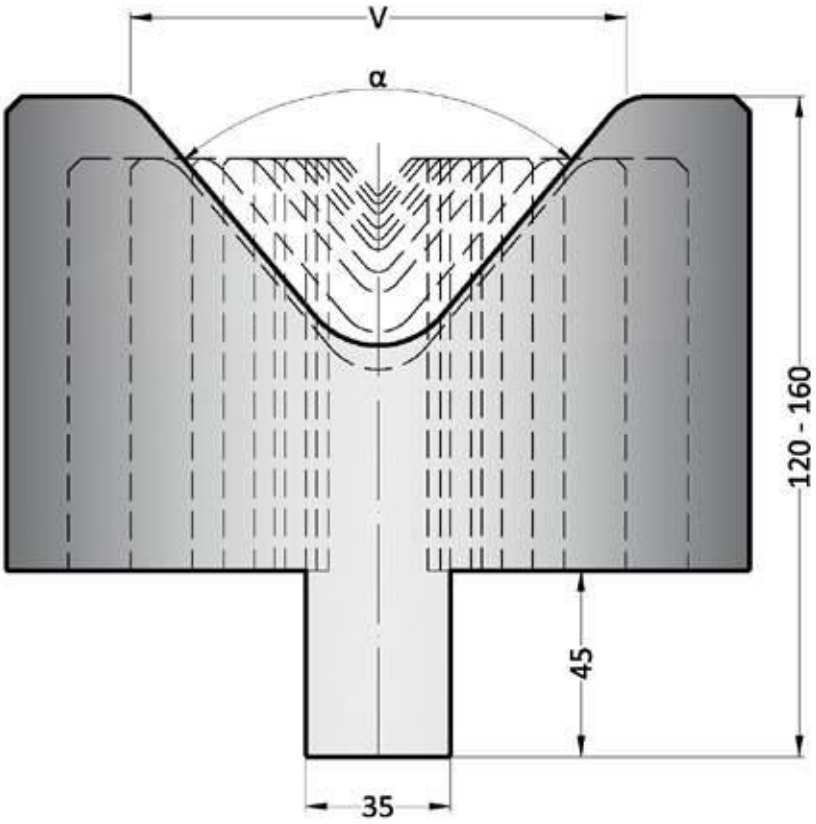
Westermann-WB

60°

80°	V	H
2.15.114	30	120.00
2.15.115	35	120.00
2.15.116	40	120.00
2.15.117	50	120.00
2.15.118	60	120.00
2.15.119	80	120.00

80°	V	H
2.16.116	24	145.00
2.16.117	30	145.00
2.16.118	35	145.00
2.16.119	40	145.00
2.16.120	50	145.00
2.16.121	60	145.00
2.16.122	80	145.00
2.16.123	100	145.00

80°	V	H
2.17.026	24	160.00
2.17.027	30	160.00
2.17.028	35	160.00
2.17.029	40	160.00
2.17.030	50	160.00
2.17.031	60	160.00
2.17.032	80	160.00
2.17.033	100	160.00
2.17.034	120	160.00

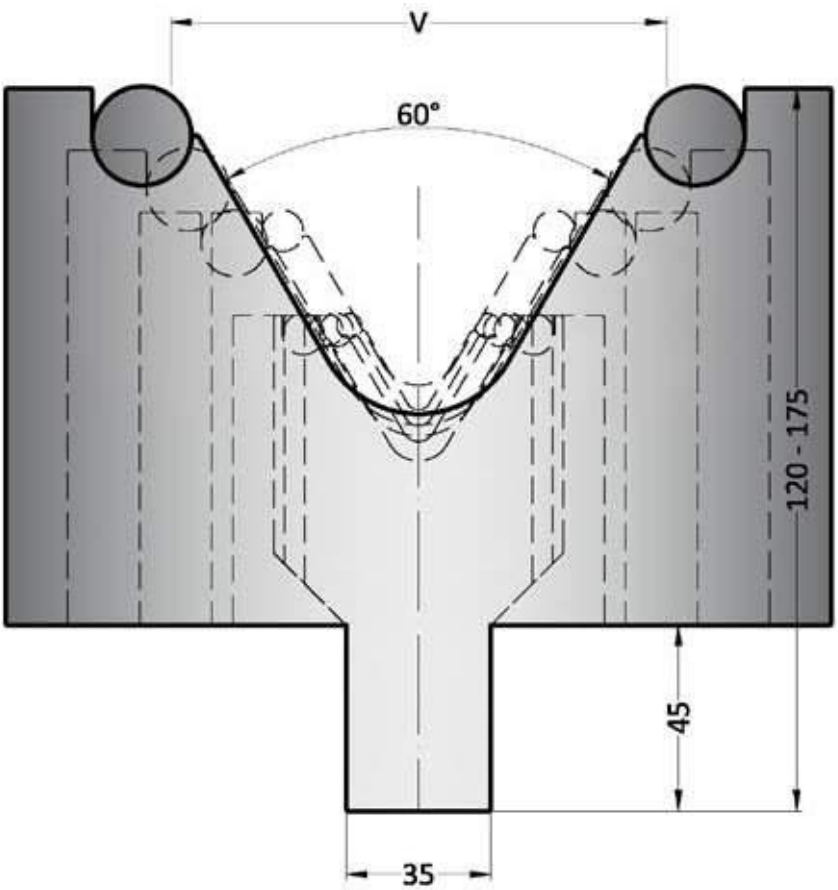


Westermann-WB

Red Line

80°

	V	α	H
2.26.011	30	60°	145.00
2.26.012	35	60°	145.00
2.26.013	40	60°	145.00
2.26.014	50	60°	145.00
2.26.015	60	60°	145.00
2.26.016	80	60°	145.00
2.26.017	100	60°	160.00
2.26.018	120	60°	175.00

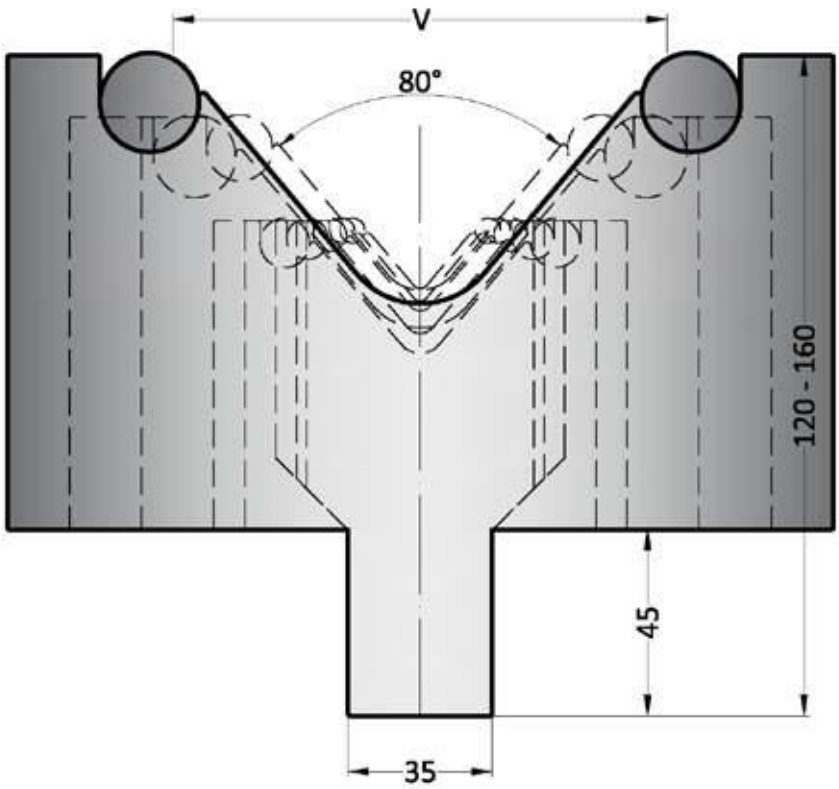


Westermann-WB - mit Einlaufwellen 60°

60°

Westermann 24 liefert Ihnen Matrizen mit Welleneinsatz. (S. 162)

	V	α	H
2.26.019	30	80°	120.00
2.26.020	35	80°	120.00
2.26.021	40	80°	120.00
2.26.022	50	80°	120.00
2.26.023	60	80°	120.00
2.26.024	80	80°	145.00
2.26.025	100	80°	145.00
2.26.026	120	80°	160.00

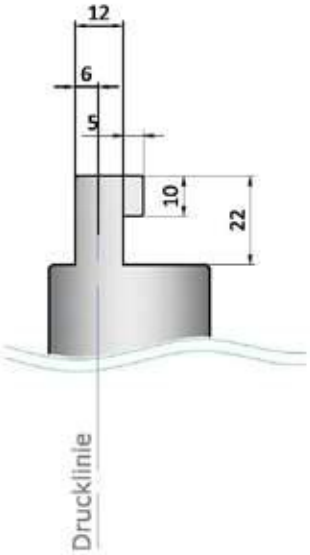


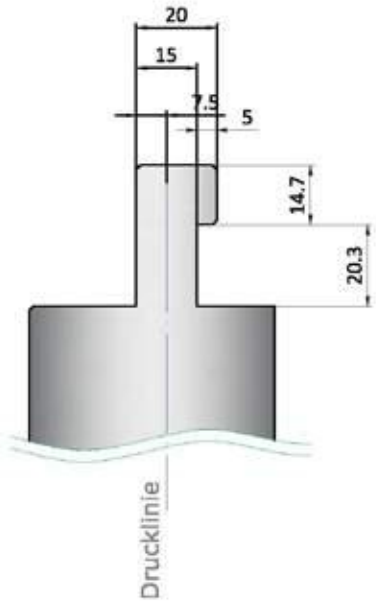
Westermann-WB - mit Einlaufwellen 80°

Red Line

80°

Red Line H





direkt einsetzbar auf Abkantpressen von:
Haco

directly able to work on bending presses of:
Haco

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendete Werkstoffe sind:
- I: C45
- II: C45, vergütet auf 800-850N/mm²
- III: 42CrMo4, vergütet auf 950-1050N/mm²
- Werkzeuge auf Anfrage: 1.2312, vergütet auf 1000-1200N/mm²

Ausführung:
Alle Biegeradien sind geschliffen und gehärtet

Werkzeuglängen:
Die Werkzeuglängen sind bei den Artikelnummern angegeben.
Artikelnummern ohne Längenangabe sind auf Anfrage.

sektionierte Werkzeugsätze:
Oberwerkzeuge:
OW 1050mm sektioniert in : 20,25,30,35,40,200,500,100HornL,100HornR

Belastbarkeit:
Die Belastbarkeit der Werkzeuge ist bei den Artikelnummern angegeben.
Werkzeuge die höher belastet werden sollen, können auf Anfrage konstruiert werden.
(siehe Seite 161)

material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- I: C45
- II: C45, tempered to 800-850N/mm²
- III: 42CrMo4, tempered to 950-1050N/mm²
- tools on request: 1.2312, tempered to 1000-1200N/mm²

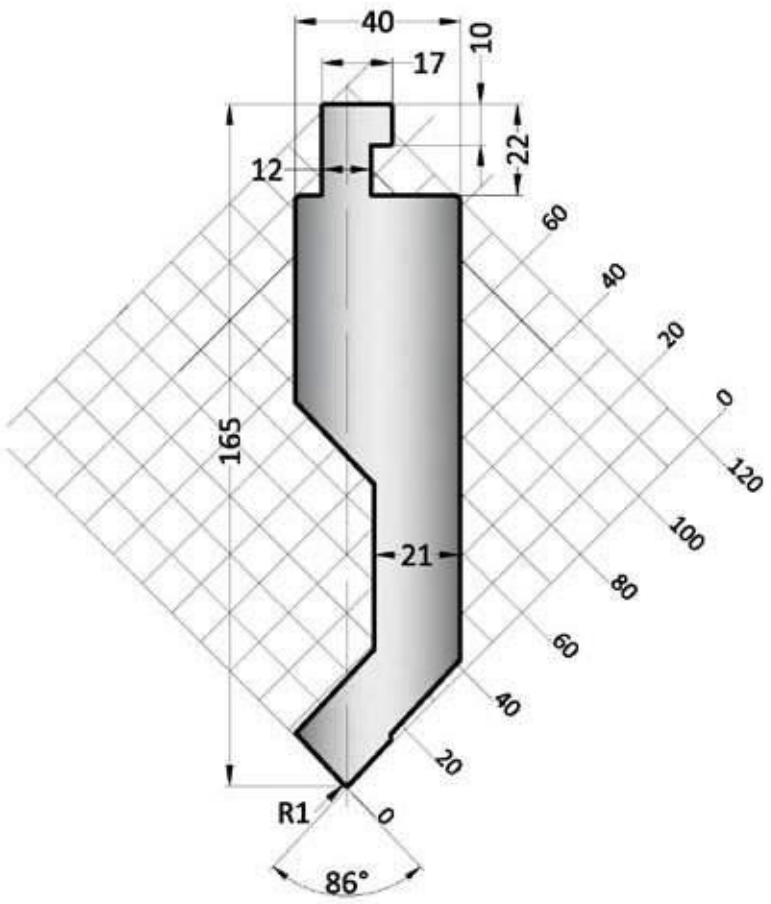
design:
All radii are grinded and hardened

length of the tool:
The tool length are posted with the art-no.
Article- number without length- determination are available on request.

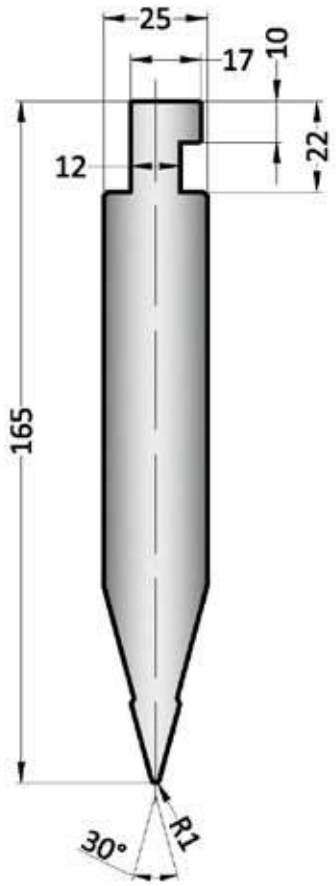
tool sets divided into sections:
Upper tool:
OW 1050mm sectioned in : 20,25,30,35,40,200,500,100HornL,100HornR

loading capacity:
The loading capacity of the tools is specified by the article number.
Tools which will also be loaded more heavily, can de designed by agreement with the relevant application engineering. (see Page 161)

1.07.010



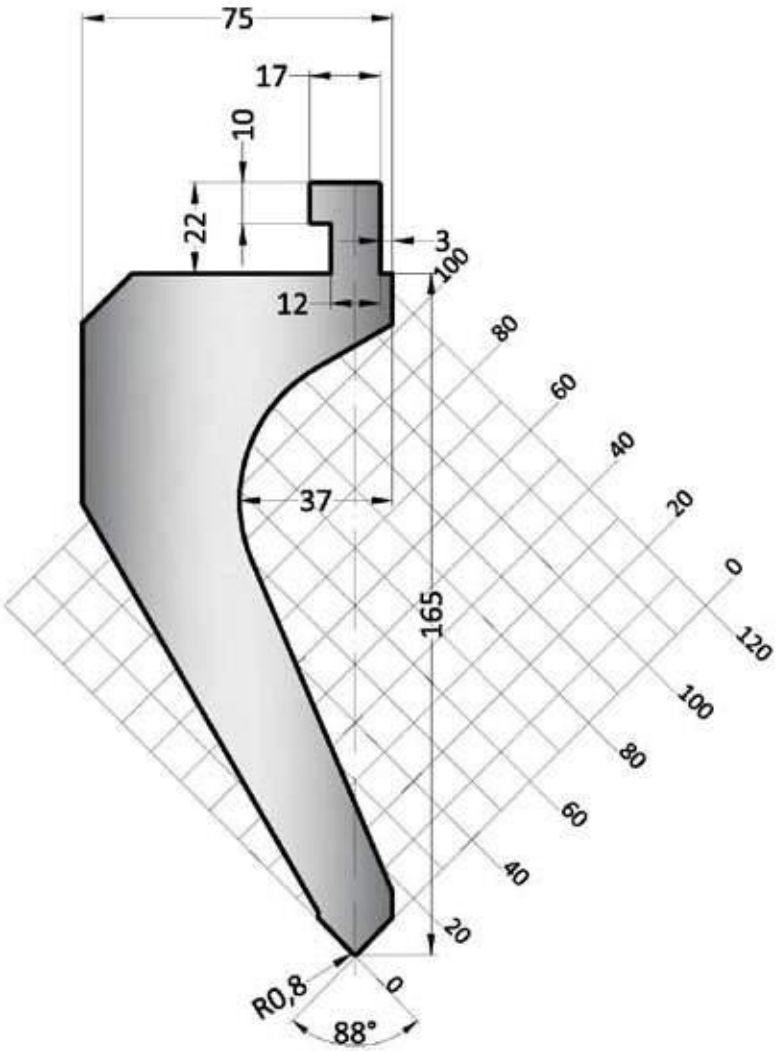
1.07.040



Red Line

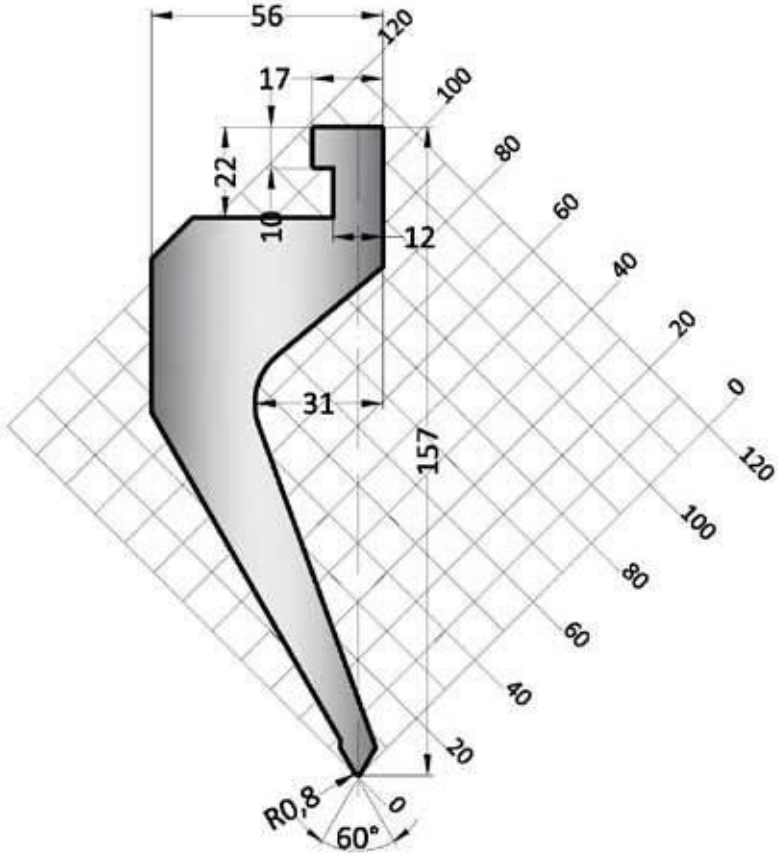
Red Line

1.07.061



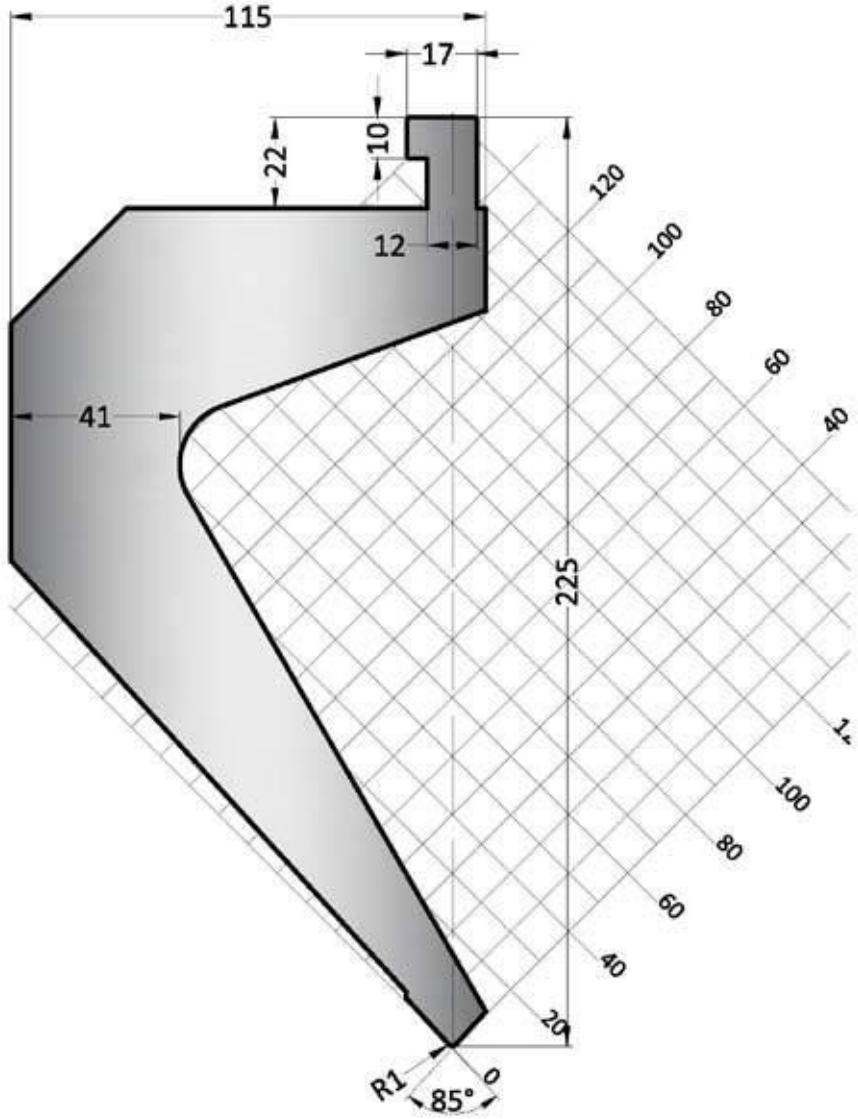
88°

1.07.062



60°

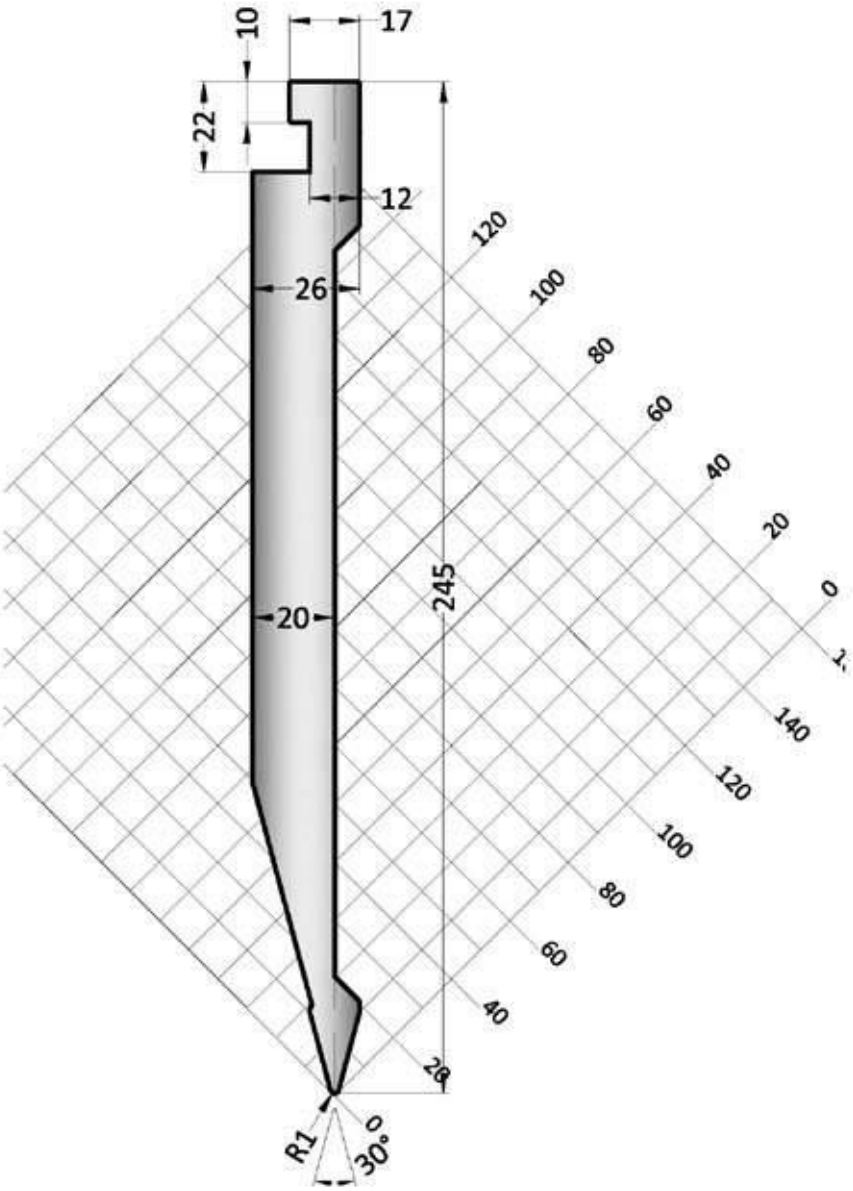
1.07.070



85°

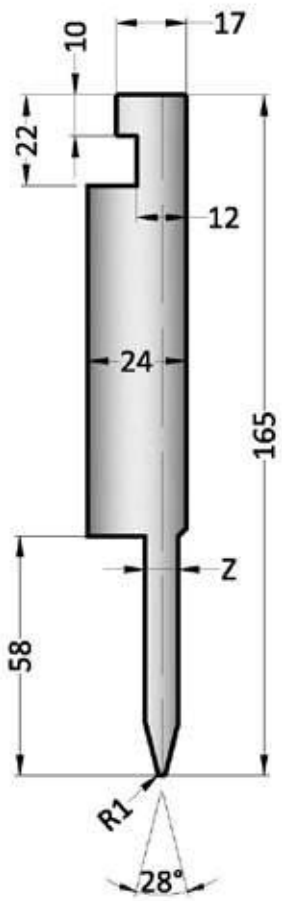
Red Line

1.07.071



30°

Red Line

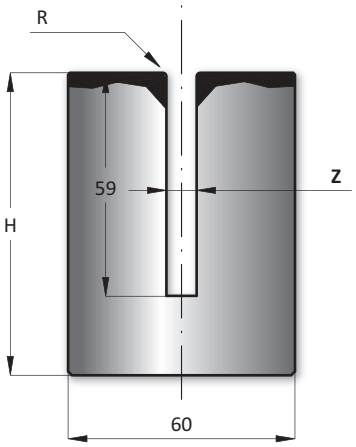


	α	R	H	Z
1.07.063	28°	1.00	165.00	8
1.07.064	28°	1.00	165.00	10
1.07.065	28°	1.00	165.00	12

28°

Red Line

	R	H	Z	T/mt	Mt
20.550	1.00	80.00	8,2	50	II
20.554	1.00	80.00	10,2	50	II
20.560	1.00	80.00	12,2	50	II

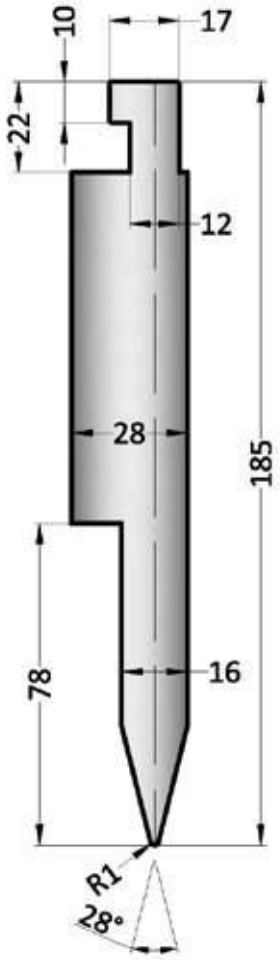


415 mm

835 mm

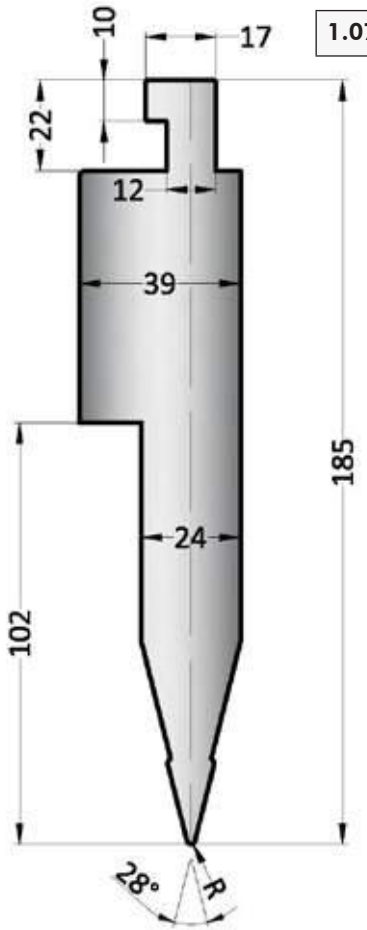
835 mm

1.07.066



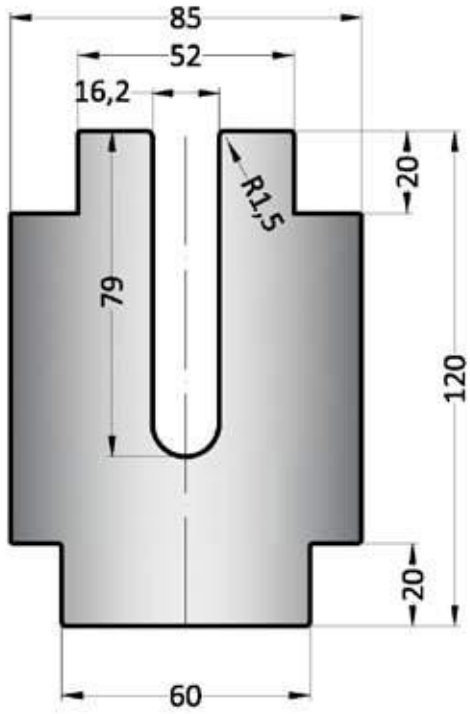
28°

1.07.067

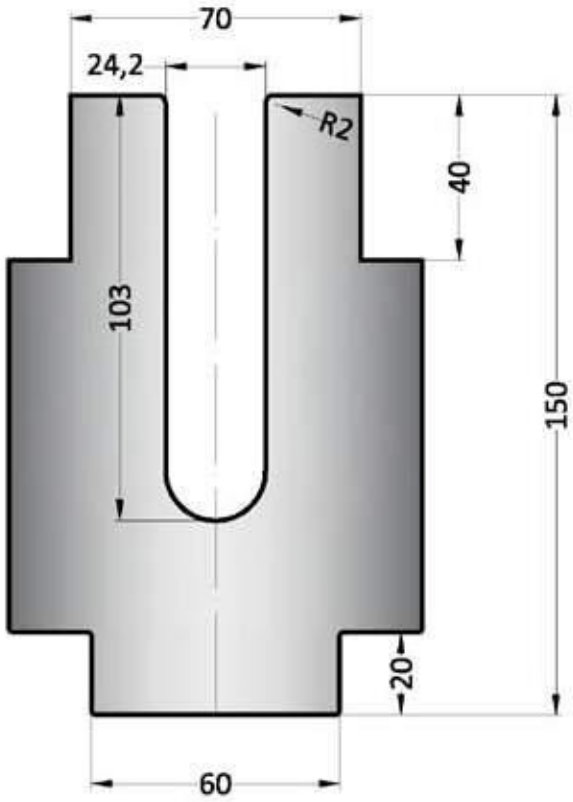


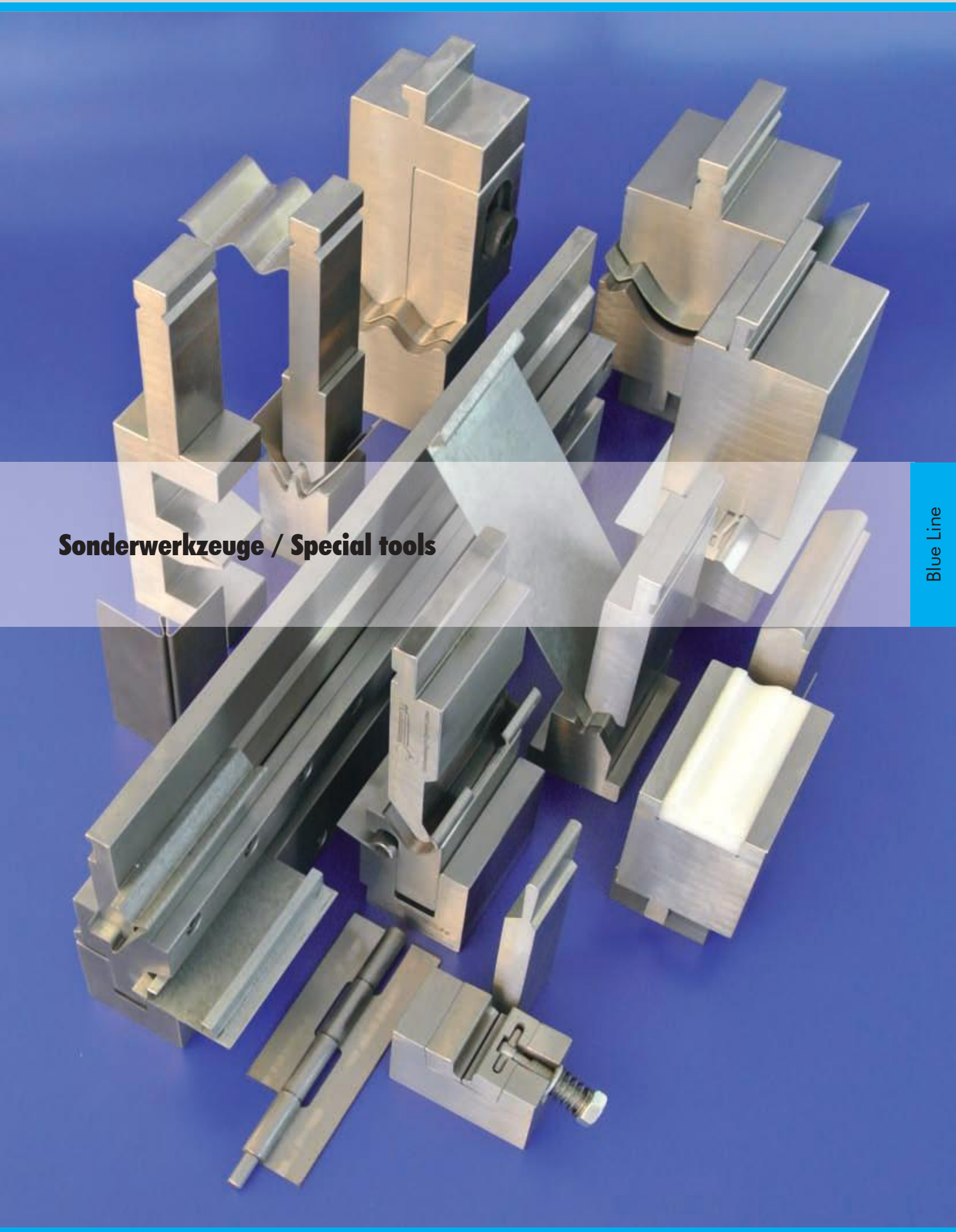
28°

2.14.335



2.14.336

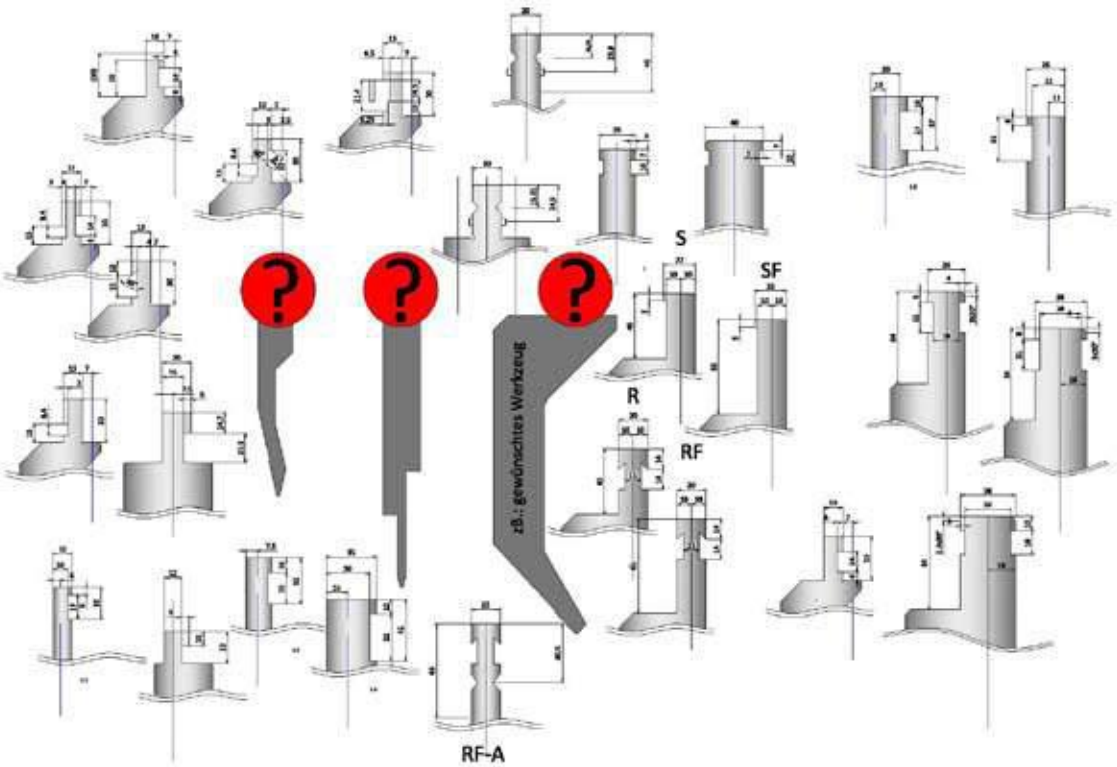




Sonderwerkzeuge / Special tools

Aufnahme nicht gefunden?

holder not found?



Sie haben Ihr Werkzeug gefunden, aber nicht mit der richtigen Aufnahme?

Sie haben nicht das richtige Werkzeug gefunden?

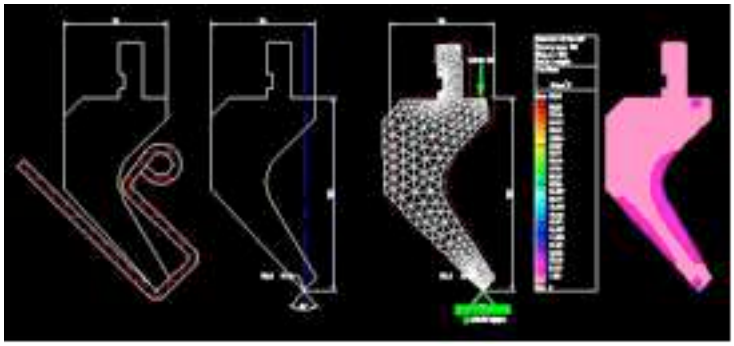
Lösung:
Westermann24 liefert Ihnen das gewünschte Werkzeug für Ihre Maschine.

You have found your tool, but the right holder is missed?

You haven't found the right tool?

Solution:
Westermann24 delivers the desired tool for your machine.

Entwicklung



Westermann24 erstellt für jedes Werkzeug eine Presskraftberechnung. / Westermann24 prepares for every tool a calculation of the pressing force.

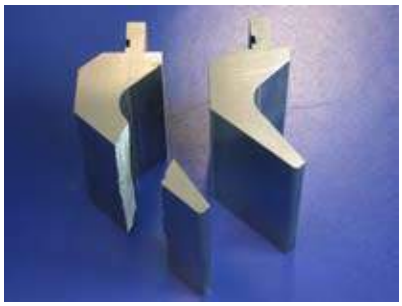
Westermann24 liefert Ihnen die richtige Werkzeugform für Ihr Produkt. Entscheidend dafür ist oft die Belastbarkeit.

Westermann24 bietet höchste Qualität durch die Auswahl unterschiedlicher Werkstoffeigenschaften in Kombination mit verschiedenen Härteverfahren.

Vorteil:

- Standzeitverlängerung durch hochwertigere Werkstoffe und Härteverfahren

Development



Vergleich zu anderen Werkstoffen / compared to other materials

Westermann24 delivers the right form of the tool for your product. Decisive is the mechanical loadability.

Westermann24 provides highest quality by the selection different properties of the material in combination with different hardening processes.

Advantage:

- Extended lifetime because of high-quality material and processes of hardening

Test Sonderwerkzeuge

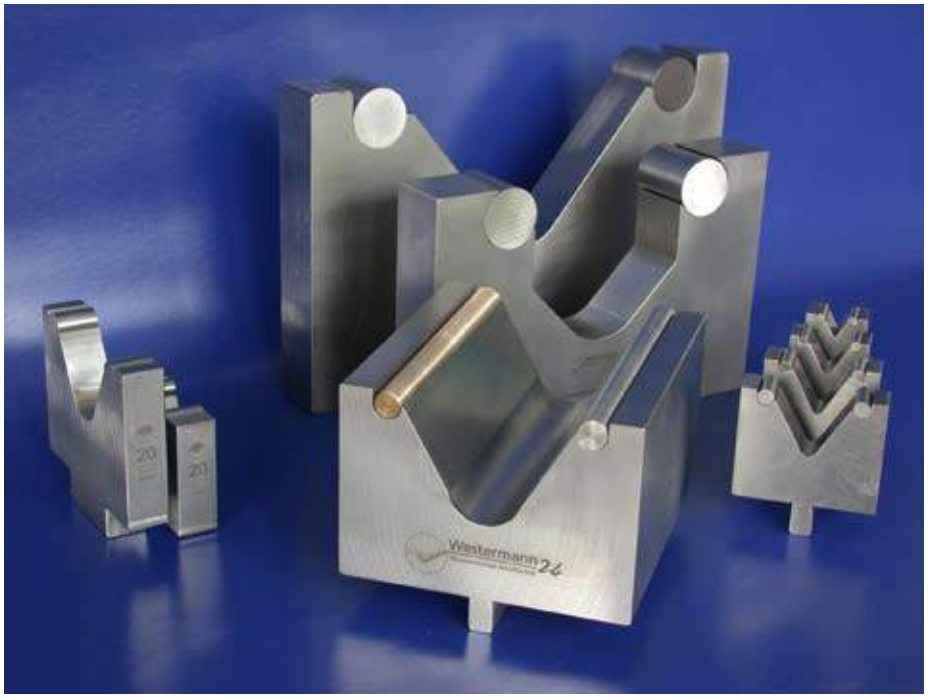
Westermann 24 liefert dem Kunden ein bereits erprobtes Werkzeug.
Die Werkzeugform ist bereits korrigiert.
Vor Auslieferung hat der Kunde bereits erste Musterbleche zur Begutachtung erhalten.

Test Special tools

Westermann 24 delivers a well proved tool to the customer.
The shape of the tool is ready adjusted.
Before the delivery stands the assessment from the sample panels from the customer.

Matrizen mit Einlaufwellen

Dies with shafts of inlet



Problem:
Herkömmliche Matrizen unterliegen oft trotz Härtung einem hohen Verschleiß.
Besonders dickere Blechstärken hinterlassen ihre Spuren.
Ungenaue Kantungen und Kantabdrücke sind vorprogrammiert.

Lösung :
Westermann 24 liefert Ihnen Matrizen mit Welleneinsatz.
Das eigentliche Werkzeug wird mittels gehärtet geschliffener Welleneinsätze zum Werkzeugträger.
Die Werkzeugsegmentierung kann wahlweise durch den Einsatz eines einteiligen Welleneinsatzes auch stoßfrei eingesetzt werden.
Der Kunde kann die Einlaufwellen einfach und kostengünstig vor Ort wechseln.
Die Welleneinsätze können zusätzlich mit einer Wellenbefestigung geliefert werden.
Es können auch Einsätze in verschiedenen Materialien eingesetzt werden.
(z.B.Ampco gegen ferritische Abriebe)

Vorteile:
- geringer Verschleiß durch Einlaufwellen
- gehärtet geschliffene Einlaufwellen CF53/60HRC
- niedrige Werkzeugkosten bei Ersatz
- Einlaufwellen einfach und schnell, selbst auswechselbar
- Reduzierung der Presskraft
- Reduzierung von Kantabdrücken

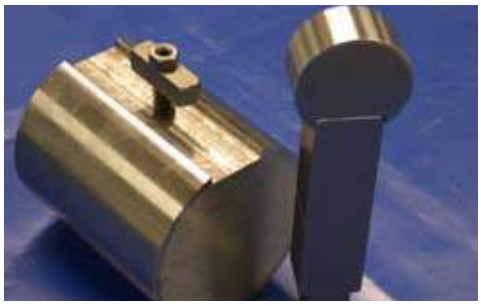
Problem:
normal dies have usual a high abrasion despite of tempering.
Especialy steal sheets of mor thickness leave their traces.
Imprecise folding and folding prints are pre-programmed.

Solution:
Westermann 24 delivers Dies with shafts of inlet.
The ordinary tool with grinded and hardened shafts of inlet is going to be a carrier of tools.
The segmentation of the tool is possible with the deployment of a one part shaft.
The customer can change the shafts of inlet at place without high costs of system.
The shaft inserts can be delivered additionaly with a shaft fixing.
In the case of the inserts is the deployment of differrent materials possible (for example Ampco against ferritistik abraision)

Advantages:
- less wear with shafts of inlet
- hardened, grounded Shafts of inlet CF53/60HRC
- less cost of tools by deployment
- Shafts of inlet changeable easy and quick by yourself
- Reducing the power of pressing
- Reducing the presses of edges

Halter und Einsätze

verschiedene Aufnahmen für OE-Einsätze / different admission for upper tool inserts



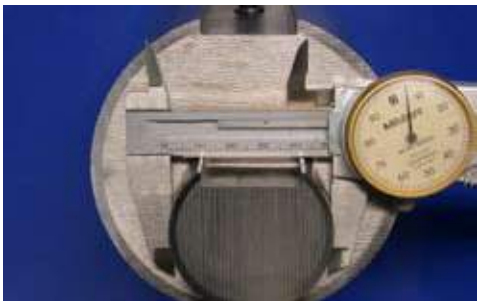
Welleneinsatz mit Nut / Shaft inserts with groove

Westermann24 liefert Ihnen Lösungen für Halter mit Einsatz.

Vorteile:
- Einsätze in gehärteter Ausführung sind möglich.
- Einsätze für höhere Presskräfte sind möglich.

Holder and inserts

Welleneinsatz rund in Prismenaufnahme / Shaft inserts round in prism take-ups

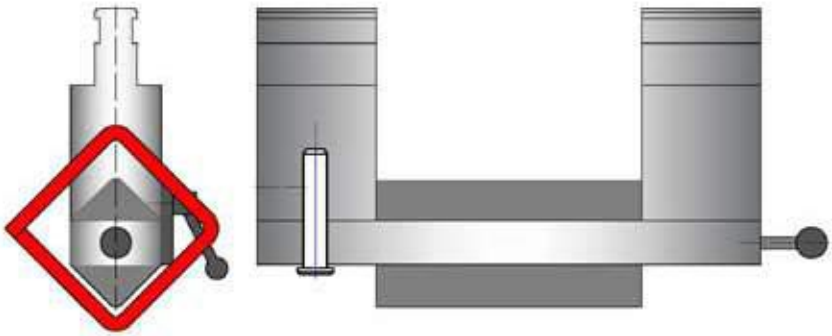


Welleneinsatz gehärtet geschliffen Cf53/HRC60 / Shaft inserts hardened and grinded Cf53/HRC60

Westermann24 delivers solutions for holder and inserts.

Advantages:
- Hardened inserts are possible.
- Inserts for higher press capacity are possible.

Brückenwerkzeug für geschlossene Profile



Unsere Lösung:
Westermann24 entwickelt für Sie ein Brückenwerkzeug, mit dem das gekantete geschlossene Profil durch den schwenkbaren Werkzeugeinsatz nach vorne entnommen werden.

Besonderheit:
Biegelänge 400mm für Kerneinsatz t=10mm VA(700Nmm²)

Bridge-tool for closed profiles

Our solution:
Westermann24 develops a bridge- tool for you, which determine the possibility for a frontal removal of the profil because of the rotating tool.

Special feature:
bending length 400mm for core insert t=10mm VA(700Nmm²)

3. Kantung / 3rd bending

Profil geschlossen / profile closed

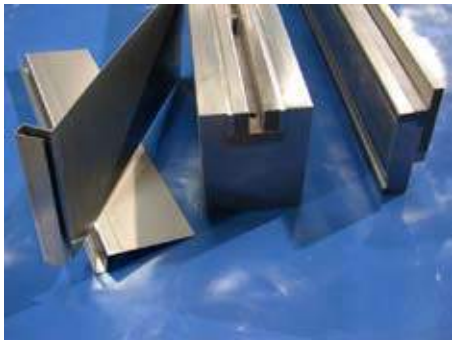
Profil kann entnommen werden / profile can be collected

Blue Line

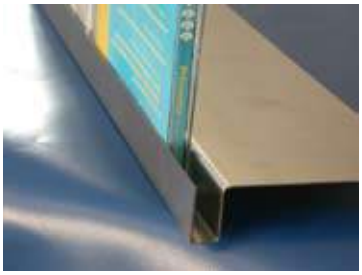
Sonderwerkzeug : zur Herstellung von Regalböden

Special tools: to produce shelves

höchst Verschleißfestigkeit / high degree of wear resistance



Werkzeug mit durchgehärteten (HRC60) und polierten Einsätzen / tools with sufficently hardness (HRC60) and policed issus



Profiltiefe / profile depth U=28x8mm

Problem:

- Das Profil ist in Einzelkantungen zu aufwendig herzustellen
- Der Regalboden darf aus fertigungstechnischen Gründen nur horizontal zugeführt werden .
- **Die Abschlusskante (3x90°) soll in einem Hub erfolgen** .
- Das Werkzeug soll für höchste Verschleißfestigkeit und hohe Stückzahlen konstruiert sein (durchgehärtete Einsätze).

Lösung:

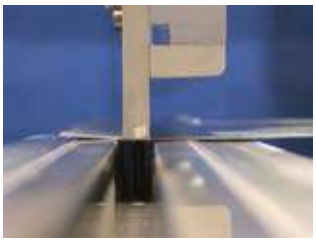
- Westermann24 liefert seinem Kunden die komplette Lösung.
- Termin vor Ort (Problemerfassung) , Konstruktion , Angebot,
- Abnahme durch Probekantung oder Abnahme durch Einrichten vor Ort .

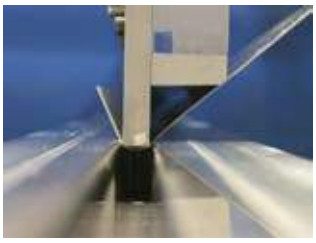
Problem:

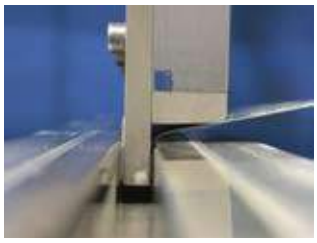
- The production of the profile is too timeconsuming in one fold.
- Out of reasons of production technology, the shelves can be feed horizontal only.
- **The closing edge (3x90°) shall be done in one stroke.**
- The tool is constructed for a high degree of wear resistance and a high number of pieces (sufficently issus).

Solution:

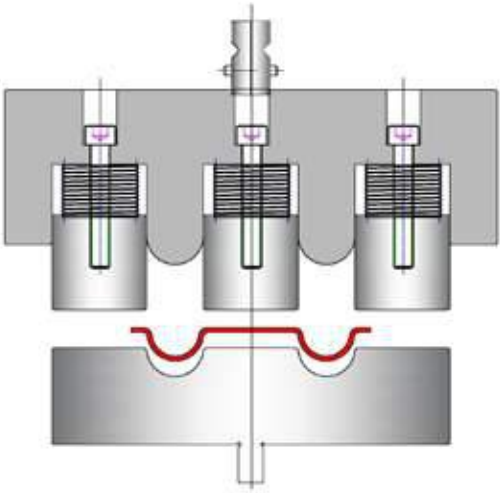
- Westermann24 delivers completly solutions to his customers .
- identification of the problem , construction , offer
- acceptance with samples of bending .







Rohrschellenwerkzeug



Unsere Lösung:
Westermann24 entwickelt ein Prägewerkzeug zur Herstellung der Rohrschelle in einem Hub..

Besonderheit:
Die Positionierung des Blechteils erfolgt über die Einzugsgewinde im Blech. Dadurch kann das Blech gleichförmig und passgenau ausgeprägt werden.

Vorteil:
Westermann 24 liefert dem Kunden ein bereits erprobtes Werkzeug.
Die Werkzeugform ist bereits korrigiert.
Vor Auslieferung hat der Kunde bereits erste Musterbleche zu Begutachtung erhalten.

Tube clambs tool

Our solution:
Westermann24 develops an embossing-tool to enable the production of tube clambs in one stroke.

Special feature:
The positioning of the plate is working about the pulling-winch in the plate. Therefore it is possible to embossing the plate uniform and tailor-made.

Advantage:
Westermann 24 delivers a well proved tool to the customer.
The shape of the tool is ready adjusted.
Before the delivery stands the assesment from the sample panels from the customer.

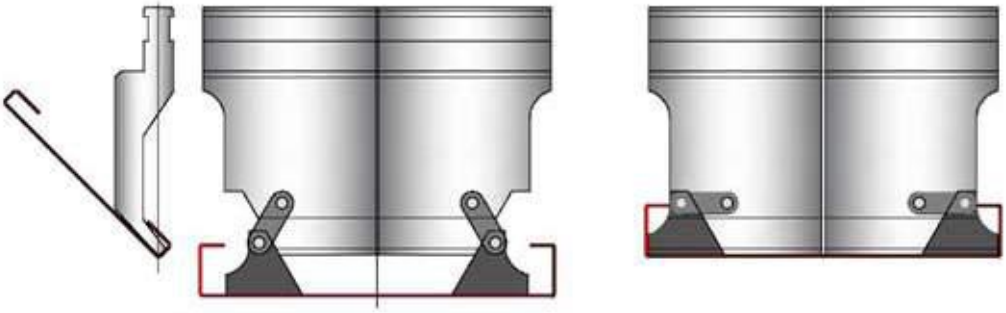
...bewegliche Hörner ?

...moveable horns ?

geöffnetes Horn / horn kept open

geschlossenes Horn / closed horn

geschlossenes Blechprofil / closed plate profil



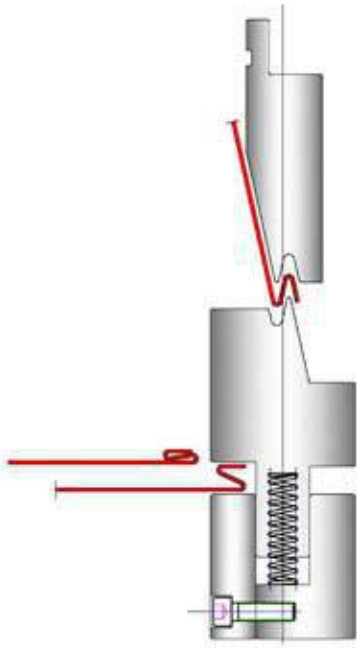
Lösung:
Westermann 24 liefert Ihnen Oberwerkzeuge mit beweglichen Hörnern.
Entweder fertig ab Lager, oder individuell für Sie gefertigt.

Besonderheit:
Die Hörner werden dabei so hergestellt, dass die Entnahme von allseitig gekanteten Blechen keine Probleme mehr bereitet.

Solution:
Westermann 24 delivers a upper tool with moveable horns.
Either ready from stock, or produced individual for you.

Special feature:
The horns will be produced in the way, that the removal of allside edging plates is no problem

Versteifung Doppelfalz

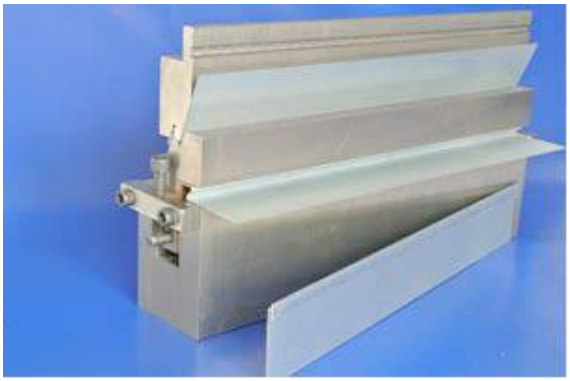


Unsere Lösung:
Westermann24 entwickelt ein Prägewerkzeug zur Herstellung des Profils in zwei Hüben.

Besonderheit:
Durch die Prägung im oberen Teil des Werkzeuges kann der gewünschte Doppelfalz nach Kundenwunsch hergestellt werden.

Vorteile:
Westermann 24 liefert dem Kunden ein bereits erprobtes Werkzeug.
Die Werkzeugform ist bereits korrigiert.
Vor Auslieferung hat der Kunde bereits erste Musterbleche zu Begutachtung erhalten.

Stiffening double seam

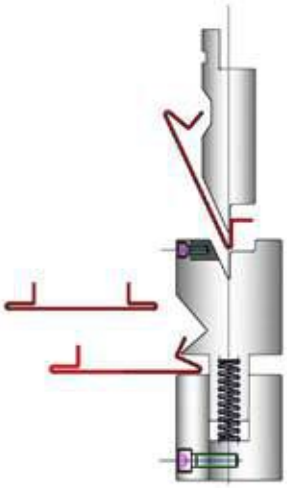


Our solution:
Westermann24 develops a embossing-tool for the production of the profile in two strokes.

Special feature:
Because of the embossing in the upper part of the tool the double seam can be produced, according to the wishes of the customers.

Advantage:
Westermann 24 delivers a well proved tool to the customer.
The shape of the tool is redy adjusted.
Before the delivery stands the assesment from the sample panels from the customer.

Schachtelwerkzeug



Unsere Lösung:
Westermann24 entwickelt ein Prägewerkzeug zur Herstellung des Profils in zwei Hüben.
Besonderheit: Das fertige Profil konnte anstelle von 6 Hüben durch Einsatz des Prägewerkzeuges im oberen Teil mit 4 Hüben hergestellt werden.

Vorteil:
Westermann 24 liefert dem Kunden ein bereits erprobtes Werkzeug.
Die Werkzeugform ist bereits korrigiert.
Vor Auslieferung hat der Kunde bereits erste Musterbleche zu Begutachtung erhalten.

Box tool

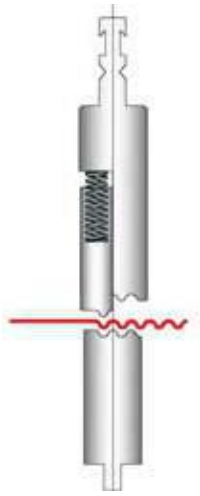
Our solution:
Westermann24 develops a embossing tool to produce profiles in two strokes.

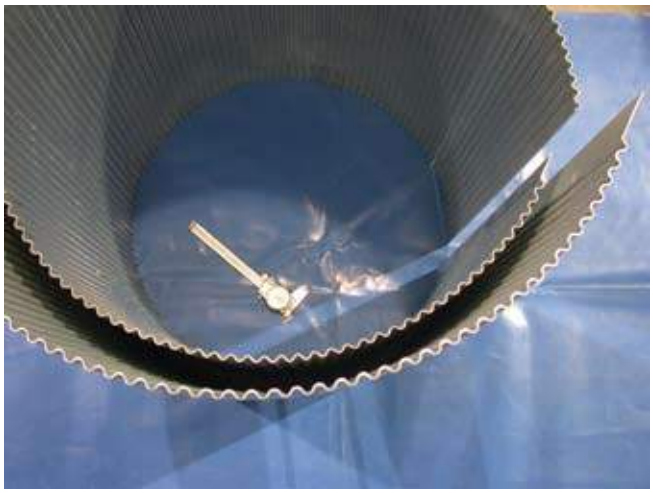
Special feature:
The ready profile can be produced instead of 6 strokes, in 4 strokes by using the embossing tool in the upper part.

Advantage:
Westermann 24 delivers the customer a well proved tool.
The shape of the tool is ready adjusted.
Before the delivery stands the assesment of the sample panels of the customer

Wellblech , Prägewerkzeug mit Niederhalter

corrugated iron, embossing- tool and blank holder





Unsere Lösung:
Westermann24 entwickelt ein Prägewerkzeug mit Niederhalter.
Dabei wird das im ersten Hub geprägte Wellenprofil durch den Niederhalter im Werkzeug fixiert.
Es wird dabei kein Anschlag mehr benötigt.
Das nachfolgende Wellenprofil kann nun parallel zum vorherigen Profil geprägt werden.

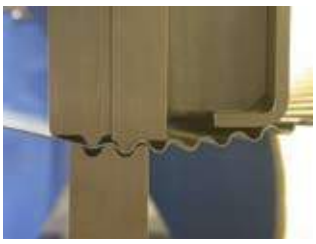
Besonderheit:
Es entsteht ein gleichförmiges und maßhaltiges Wellblechprofil.

Vorteil:
Westermann 24 liefert dem Kunden ein bereits erprobtes Werkzeug.
Die Werkzeugform ist bereits korrigiert.
Vor Auslieferung hat der Kunde bereits erste Musterbleche zu Begutachtung erhalten.

Our solution:
Westermann24 develops an embossing- tool with blank holder.
The embossed corrugated profil in the first hub is fixed by the blank holder in the tool.
In this case a retractable is no more nesessary.
The following corrugated iron can be produced as like as the profile before.

Special feature:
It arises an uniform and proper dimensioned corrugated iron profile.

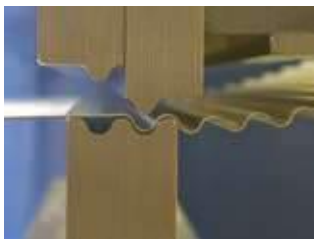
Advantage:
Westermann 24 delivers a well proved tool to the customer.
The shape of the tool is ready adjusted.
Before the delivery stands the assesment from the sample panels for the customer.



Einlegen der vorherigen Kantung / inserting of the previous bending

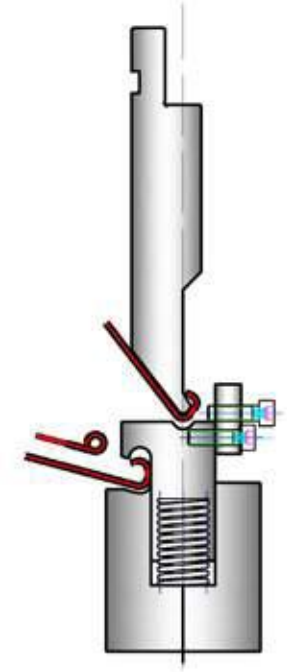
Prägen des nachfolgenden Wellenprofils / embossing of the following profil

Fertiges Wellenprofil / ready embossed corrugated profil



Prägen des nachfolgenden Wellenprofils / embossing of the following profil

Einrollwerkzeug



Roll-in tool

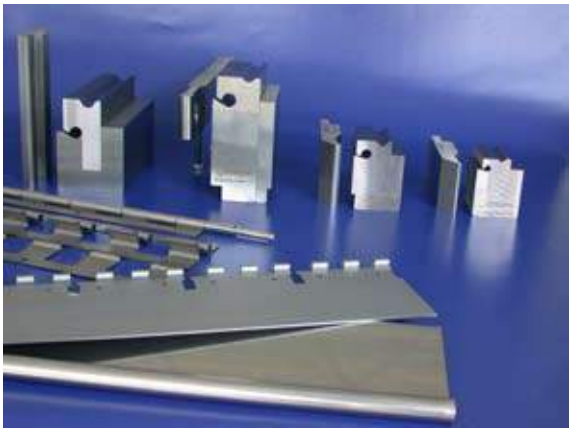
Die Herstellung des Profils erfolgt in drei Schritten:
1.+2. Schritt: das Vorkanten der Abwicklungslänge
3. Schritt: das Einrollen des Radius

The production of the profile is based in three steps:
1.+2. steps: the preliminary edging of the roll out length
3. step: the rolling in of the radius

Unsere Lösung:
Westermann24 liefert Ihnen Einrollwerkzeuge zur Herstellung von Scharnieren oder runder Kanten wie Sitzbänken oder Rinnen .
Die Werkzeuge werden für verschiedene Radien, Blechstärken und Materialien hergestellt.
Dabei wird die Blechstärke und das zu kantende Material bezüglich der Rückfederung berücksichtigt.

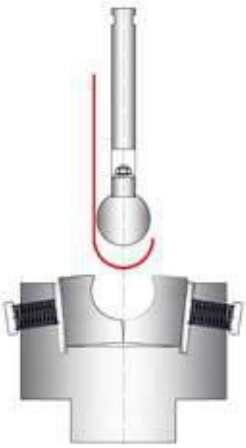
Our solution:
Westermann24 delivers a roll in tool for the production of hinges or round edges as like benches or channels.
The tools are produced for differrent radien, plate thickness and materials.
The plate thickness is important because it has to be concidered according the rebound.

Scharnier mit Innendurchmesser 8mm / hinges with inner diameter 8mm



Einrollwerkzeuge in verschiedenen Größen / Roll in tools in differrent sizes

Schwenkbackenwerkzeug mit Positionierung und Formschluss



Unsere Lösung:
Westermann 24 entwickelt ein Schwenkbackenwerkzeug mit Formschluss, welches in einem Hub das gewünschte Profil erzeugt.
Das Blech wird über einen Positionierstift beim Kantvorgang gehalten.
Beim Überbiegen des Blechprofils wird gleichzeitig ein Formschluss geprägt, der ausgeknickte Buchstaben zum gewünschten Radius angleicht.

Besonderheit:
Das Profil soll in einem Hub hergestellt werden.
Der vorher eingebrachte Schriftzug befindet sich auf der Biegelinie. Teilbereiche einiger Buchstaben würden bei einer „freien Biegung" aus dem gebogenen Radius herausstehen.
Zusätzlich soll der Schriftzug beim Biegevorgang nicht verrutschen.

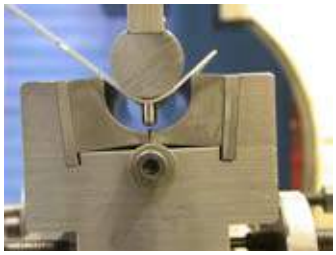
Vorteil:
Westermann24 liefert Ihnen ein bereits erprobtes Werkzeug.
Das Werkzeug ist bereits korrigiert.
Vor Auslieferung der Werkzeuge hat der Kunde erste Musterbleche zur Bemusterung erhalten.

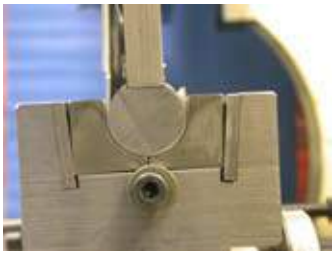
Panning jaws tool with exact positioning and form locking

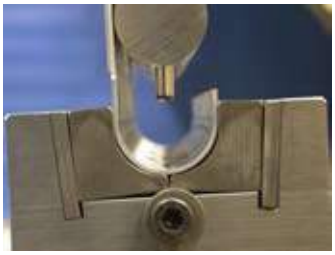
Solution:
Westermann 24 develops a panning jaws tool with form locking, which is producing the required profile in one stroke.
The metallic sheet is moved over the positioning pin while the edging process.
While the overbending of the metallic sheet simultanously it is stroking a form locking, which is adapt the beeing buckled out letter to the desired radius.

Special feature:
The profil should be produced in one stroke.
The writing which has been introduced before is now on the bendline. In the case of a free bending individuell sections of some letters will be look out of the bended radius.
Additionally while the bending process the writing shall be at the same place.

Advantage:
Westermann24 delivers a well proved toll to the customer.
The shape of the tool is ready adjusted.
Before the delivery stands the assesment from the sample panels from the customer.



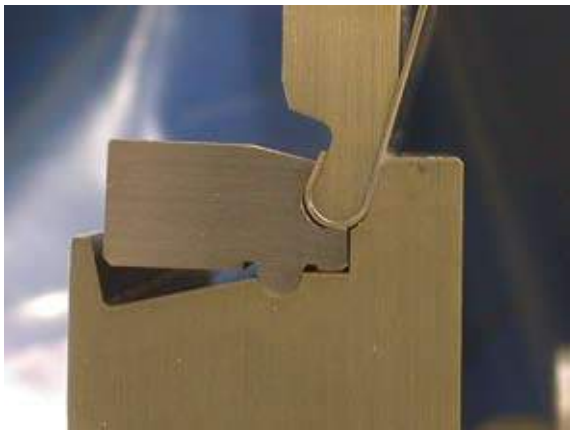




Stationswerkzeug:

1. Hub = Schwenkbackenwerkzeug

2. Hub = Absetzwerkzeug



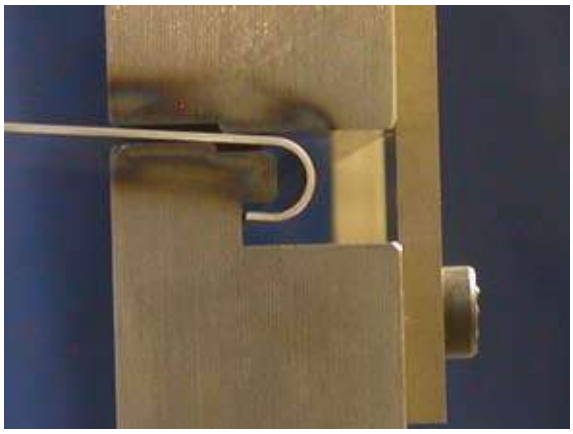
überbiegen des Radius in einem Arbeitsgang / overbending of the radius in one step

Problem:
Die Herstellung eines Blechprofils, welches sonst in 4 Hüben hergestellt wurde, soll verbessert werde. Zusätzlich besteht das Problem, dass die Abwicklungslänge beim Biegen des 180° Radius an der Oberwange anschlägt.

Lösung:
Westermann 24 entwickelt ein Schwenkbackenwerkzeug, welches in einem Hub den Radius inklusive Überbiegung herstellt, ohne dass die Anwicklungslänge des Bleches am Oberwerkzeug anschlägt, und dadurch verbogen wird.
Im 2. Arbeitsgang wird durch ein Absetzwerkzeug die Z-Stufe in einem Arbeitsgang geprägt.

Beide Werkzeuge werden als Stationswerkzeug in der Höhe aufeinander abgestimmt.
Somit lässt sich das Blechprofil in einem Arbeitsgang herstellen, ohne dass es zwischenzeitlich aus der Hand gelegt werden muss.

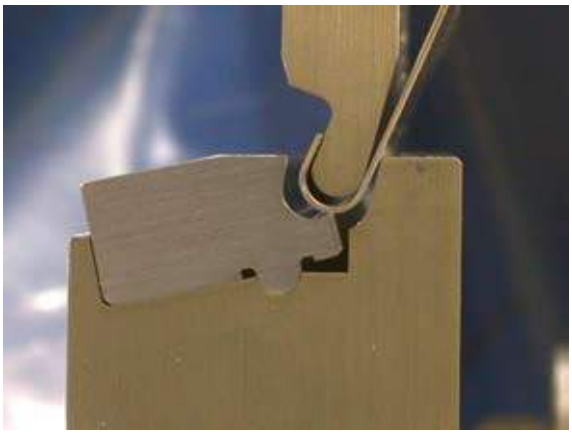
Vorteile:
Durch den Einsatz von Westermann - Werkzeugen, konnte die Herstellungszeit für das Blechprofil um mehr als 50% reduziert werden.
Eine weitere Zeiteinsparung wurde durch den Aufbau als Stationswerkzeug erzielt.



Station tool:

1. stroke= Swivel-cheek- tool

2. stroke = set down-tool



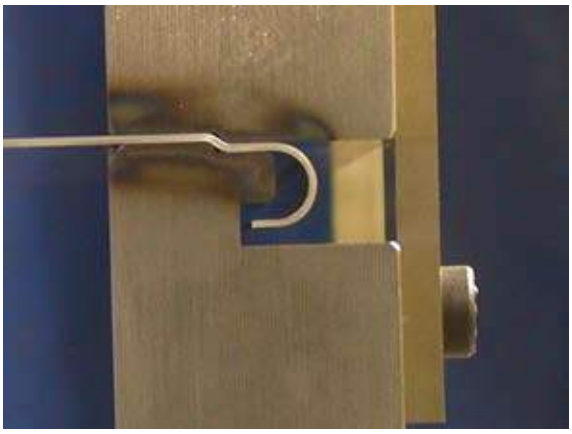
das Blechprofil schlägt dabei nicht am Oberwerkzeug an / the steal sheet don´t contact the upper tool

Problem:
The production of a profile out of a metallic sheet, which has been produced in 4 strokes, should be improved. Additionally there is the problem: The length of the material gets contact with the upper tool by the bending process till 180° radius

Solution:
Westermann 24 develops a Schwenkbacken-tool, which creates in one stroke the radius inclusive overbending, without contacting with the length of the sheet the upper tool and without not desired bendings.
In the second process will be made the embossing process of the Z-step by a set down-tool.

Both tools will be as station- tools in the highness coordinated.
So the profile will be produced in one working step, without disruption.

Advantage:
Because of the deployment of Westermann - tools, the time for production has been reduced for the profile by 50%.
A further time saving is possible within the building up of the station- tool.



Prägewerkzeug für Reflektorblech

Problem:
Der Radienverlauf des Blechprofils ist eine schräg gestellte Ellipse, die unter einem bestimmten Winkel und Abstandsmaß reflektieren soll. Alle Maße im Bezug zu den Positionsbohrungen im Reflektorblech. Die Spiegelfläche muss fließendes Licht projizieren und darf keinerlei Abdruck aufweisen.

Lösung:
Westermann24 setzt ein säulengeführtes Werkzeug mit Kunststoffeinsatz ein.
Das Prägeprofil wird durch eine vollprofilierte Schleifscheibe maßgenau bezüglich der Rückfederung erzeugt.

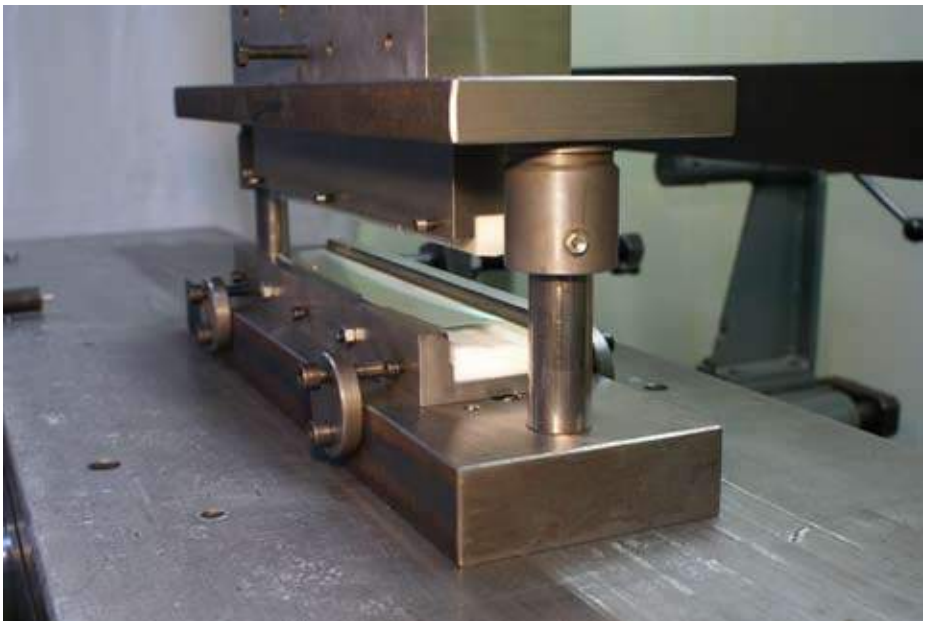
Ergebnis: 1xHub=1Teil

Stamping tool for reflector sheets

Problem:
The art of the radii of the profile of steal is a slanting placed ellipse, which shall be reflecting in a determined angle and distance dimension. All distances according to the positioning holes in the area of the reflector sheet. The reflector surface have to produce fluid light and there cannot be any print on it.

Solution:
Westermann24 uses a column-guides tool mit plastic-inserts.
The embossing profile is going to be produced by a profiled grinding wheel accuracy according of the spring back.

Result: 1xHub=1Teil



Werkzeuglösung für verkröpftes Z-Profil

A tool-solution for a cranked Z- profil

Frei tragender Niederhalter / cantilever blankholder

Verkröpftes Z-Profil / cranked Z-profil

Unsere Lösung:
Ein Doppelhubwerkzeug hält zwischen zwei frei tragenden Niederhaltern das Z-Profil gegen Verdrehung fest. Im Ausprägen werden die beiden Profilenden in einem Hub zum bestehenden Z-Profil abgesetzt bzw. verkröpft. Durch verschiedene Prägeeinsätze werden unterschiedliche Profilendstücke erzeugt.

Our solution:
A double-stroke tool is fixing a Z- profile between two cantilever blankholder against distorsion. Both profil endings are deposed especially cranced in one stroke to the existing Z- profile. With differrent embosed inserts will be produced differrent endpieces of profiles.

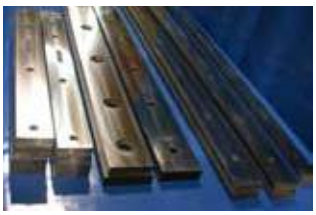
Blue Line

Nachschleifen / Neufertigung /Scherenmesser

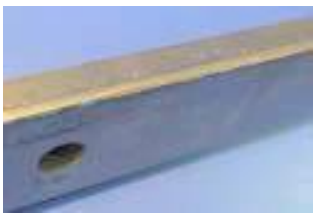
Nachschleifservice und Neufertigung bis 6500mm/einteilig

Regrinding / New production / Shearingknives

Regrinding service and new production till 6500mm/ one piece made

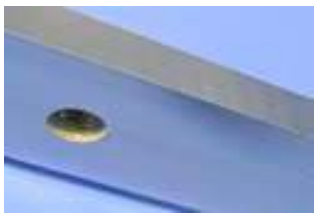


Neufertigung / New production



Scherenmesser zum Nachschleifen/ shearingknives for regrinding

schleifen bis 6500mm / grinding till 6500mm



Scherenmesser nachgeschliffen / shearingknives regrinded

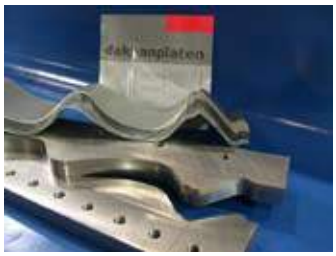
Nachschleifen-Lieferzeit :
zum vereinbarten Termin sofort (z.B.: 6 Uhr Anlieferung , 12 Uhr Abholung)

Neufertigung:
Westermann24 fertigt für Sie Scherenmesser mit kontinuierlich hoher Qualität . Dabei berücksichtigen wir Ihre besonderen Wünsche (zu schneidendes Material , Härte, Standfestigkeit...) oder auch Sonderwünsche .

Delivery-period for regrinding:
immediately to the agreed date (as usual: 6 o' clock on delivery , 12 o' clock pick up)

New production:
Westermann24 produces shearingknives with a high quality result every day for you. Further your individual wishes should be considered (Material to be cut , hardness , resistance...) or special requests too.

Komplett-Sonderlösung von / Custom Solutions individualy by Westermann24:



Werkzeuglösung für Falz mit 90°

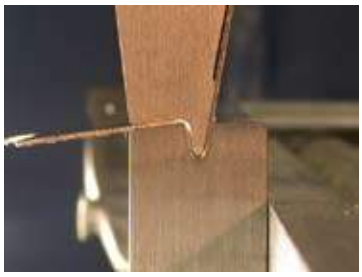
A tool solution for folding with 90°

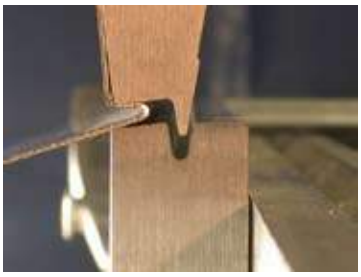
Unsere Lösung:
Ein Falzwerkzeug mit Ausprägung der angrenzenden 90° Kantung.

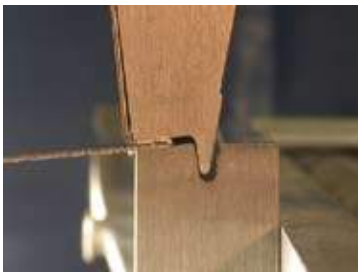
Besonderheit:
Der Falz wird mit dem gleichen Werkzeug zugedrückt.
2x Hub..., fertig.

Our solution:
A folding tool with tangential expression of the 90° bending.

Special feature:
The fold can be shut with the same tool.
2 x stroke..., ready.

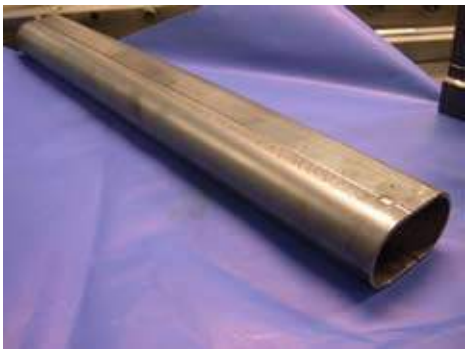






Schwenkbackenwerkzeug

Panning –jaws-tool

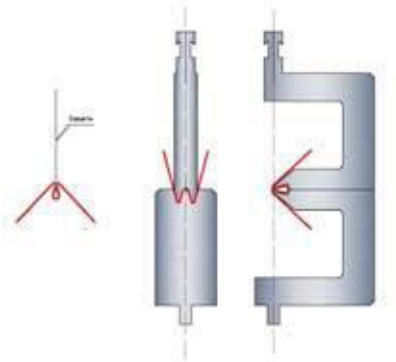


Flachrohr 100x65/Blechstärke 6mm / flat-tube 100x65/
metal-thickness 6mm

Unsere Lösung:
Für das Flachrohrprofil wurde ein Schwenkbackenwerkzeug eingesetzt.
Die Biegewinkel müssen parallel sein, um als Halbschale verschweißt werden zu können.

Our solution:
For the production of the flat-tube-profile was used a panning-jaws-tool.
The bending angle have to be paralel to enable the welding as a half shell.

Eiskartenhalter geschlossenes Profil

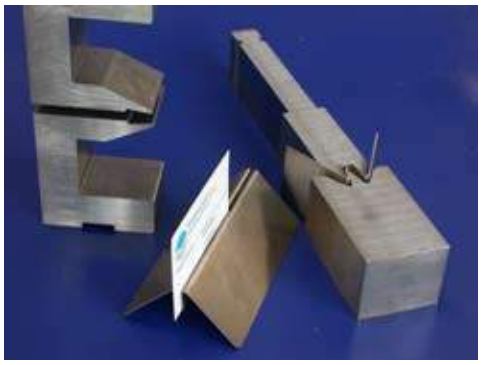


Unsere Lösung:
Westermann24 entwickelt ein Stationswerkzeug zur Herstellung des Profils in zwei Hüben.
Die Werkzeuge sind höhengleich abgestimmt und nebeneinander auf der Abkantpresse aufgebaut.
Der Kartenhalter kann somit in einem Durchgang hergestellt werden.

Besonderheit:
Es handelt sich um ein geschlossenes Profil.

Vorteil:
Westermann 24 liefert dem Kunden ein bereits erprobtes Werkzeug.
Die Werkzeugform ist bereits korrigiert.
Vor Auslieferung hat der Kunde bereits erste Musterbleche zu Begutachtung erhalten.

Mapholder closed profile

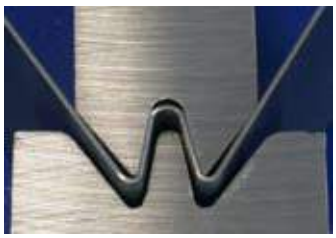


Our solution:
Westermann24 has been developed a Stationswerkzeug for pruducing the profils with two strokes.
The tools are at the same level coordinated and are build up stowed side by side at the press brake.
So it is possible to produce the mapholder in one session.

Special feature:
It is an closed profile.

Advantage:
Westermann 24 delivers a well proved tool for the customer.
The shape of the tool is ready adjusted.
Before the delivery stands the assessment from the sample panels of the customer.

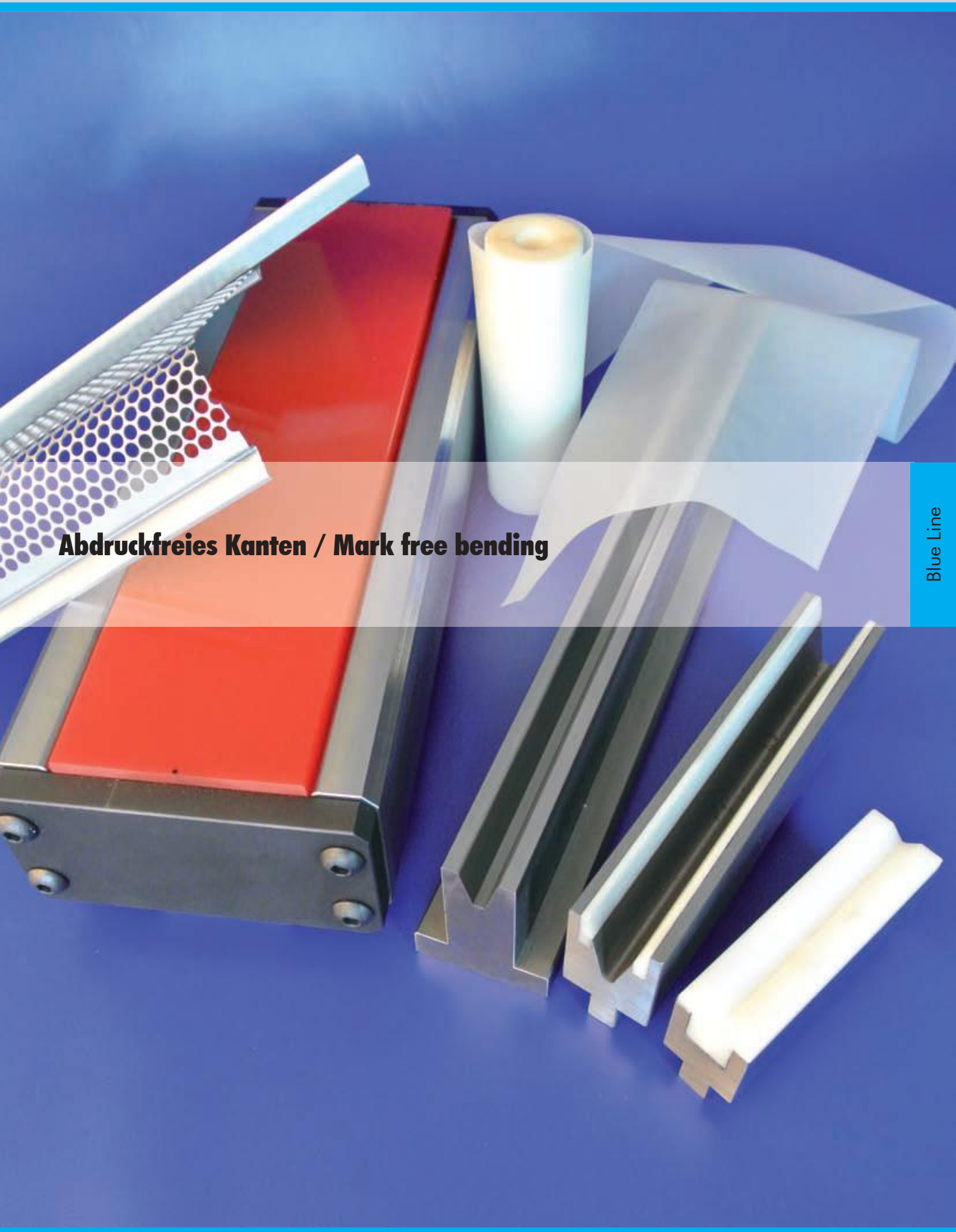
Fertigung: 5 Stück Kartenhalter pro Hub / 5 pieces mapholder per stroke



Prägewerkzeug: Vorkanten / stampingtool: Preliminary edging

Zudrücken des geschlossenen Profil / pressing the closed profile

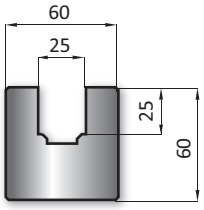
Blue Line



Abdruckfreies Kanten / Mark free bending

415 mm
835 mm

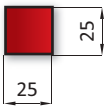
20.271



PU-Aufnahme - Urethane holder

415 mm
835 mm

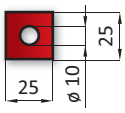
	Shore
34.180	80A
34.190	90A
34.195	95A



PU-Polster - Urethane

415 mm
835 mm

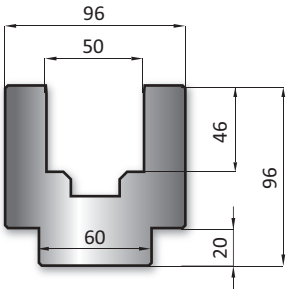
	Shore
35.180	80A
35.190	90A
35.195	95A



PU-Polster mit Kernloch - Urethane with hole

415 mm
835 mm

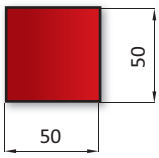
20.272



PU-Aufnahme - Urethane holder

415 mm
835 mm

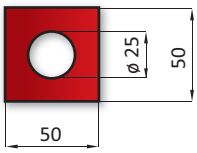
	Shore
34.280	80A
34.290	90A
34.295	95A



PU-Polster - Urethane

415 mm
835 mm

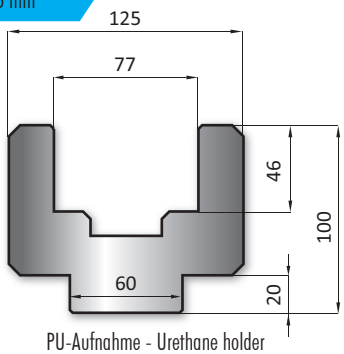
	Shore
35.280	80A
35.290	90A
35.295	95A



PU-Polster mit Kernloch - Urethane with hole

415 mm
835 mm

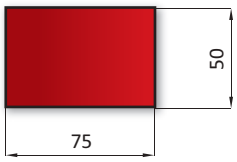
20.273



PU-Aufnahme - Urethane holder

415 mm
835 mm

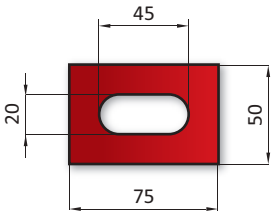
	Shore
34.380	80A
34.390	90A
34.395	95A



PU-Polster - Urethane

415 mm
835 mm

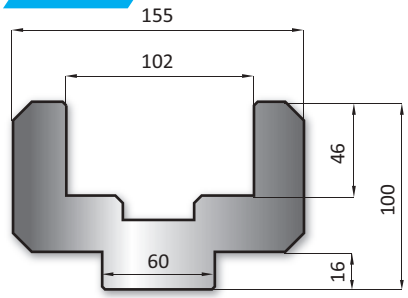
	Shore
35.380	80A
35.390	90A
35.395	95A



PU-Polster mit Kernloch - Urethane with hole

415 mm
835 mm

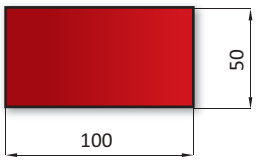
20.274



PU-Aufnahme - Urethane holder

415 mm
835 mm

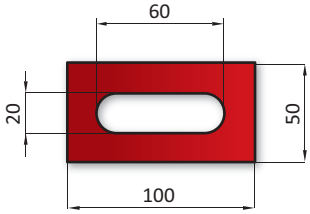
	Shore
34.480	80A
34.490	90A
34.495	95A



PU-Polster - Urethane

415 mm
835 mm

	Shore
35.480	80A
35.490	90A
35.495	95A

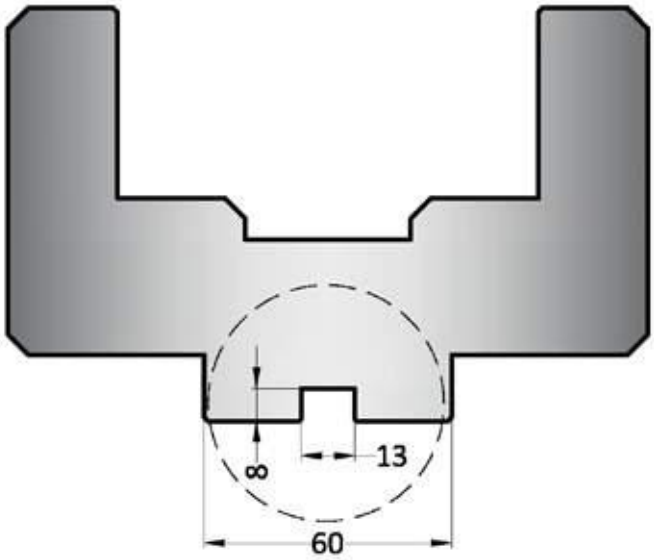


PU-Polster mit Kernloch - Urethane with hole

Blue Line

Modifikation PU-Aufnahme

Modification of urethane holder



Modifikation der Aufnahme (Artikel 20.271, 20.272, 20.273 und 20.274) mittels Adaptern einsetzbar auf allen Abkantpressen.

Adapter siehe Seite 195

Modification of the urethane holder (Article 20.271, 20.272, 20.273 and 20.274) with the use of an adapter suitable for all types of press brakes.

Adapter see page 195

Blue Line

Abkantfolie

A metal foil for bending

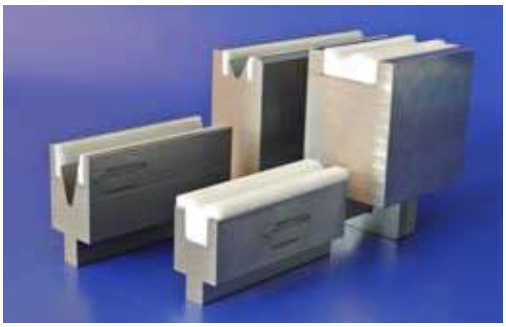
Artikelnr. (A x B)	Länge
VU 0,4 x 102	30m
VU 0,4 x 152	30m
VU 0,55 x 100	30m
VU 0,55 x 200	30m
VU 0,8 x 102	30m
VU 0,8 x 152	30m
VU 2,0 x 150	50m

Kunststoffeinsätze

Westermann24 bietet Ihnen einen besondern Kunststoff, der sich durch Härte und besondere Gleitfähigkeit auszeichnet.

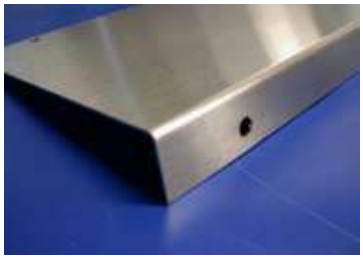
Kunststoffeinsätze

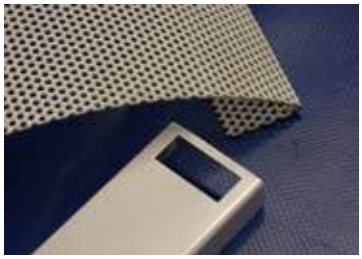
Westermann24 offers you a extraordinary plastic material, which is distinguished of hardness and a special sliding ability.



Das Ergebnis:
- Einwandfreie Funktion ohne Kantabdruck
- Hervorragende Winkelgenauigkeit durch eingepressten Kunststoff

The result:
- Ensuring faultless functioning without edge pressings
- Excellent angle precision by pressed in plastic



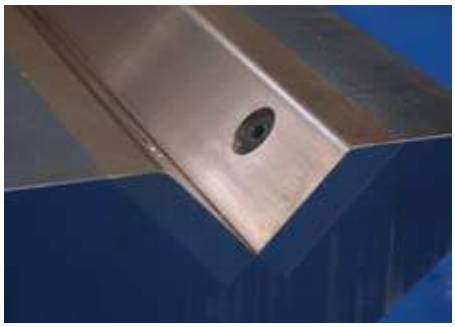


Einwandfreie Funktion ohne Kantabdruck. / faultless function without edge pressings.

Auch bei Prägewerkzeugen ohne Abdruck / with embossing tools, too

Matrize aus Ampco verhindert ferritischen Abrieb

The die out of Ampco prevents ferritic abrasion

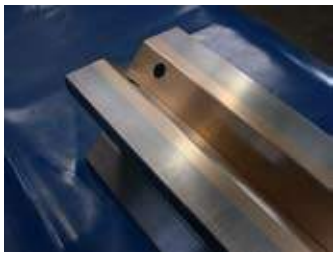


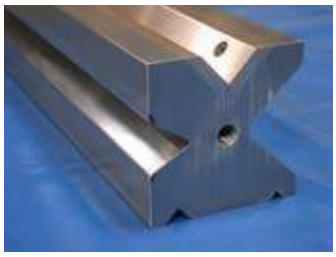
Zugfestigkeit bis 630 N/qmm.
Hohe Härte bei geringer Bruchdehnung. Sehr hohe Druckfestigkeit und mechanische Verschleißbeständigkeit.

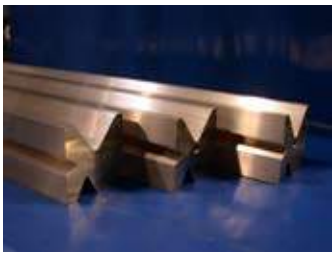
Tensile force till 630 N/qmm . High hardness with less elongation of break. Very high compressive strength and mechanical abrasion resisting quality.

Merkmale:
- Abkantwerkzeuge aus Ampco verhindern den ferritischen
- Abrieb auf Edelstahlblechen die für die Lebensmittelindustrie benötigt werden .
- Dadurch entfällt kostenaufwendige Nachbearbeitung an den Blechen .

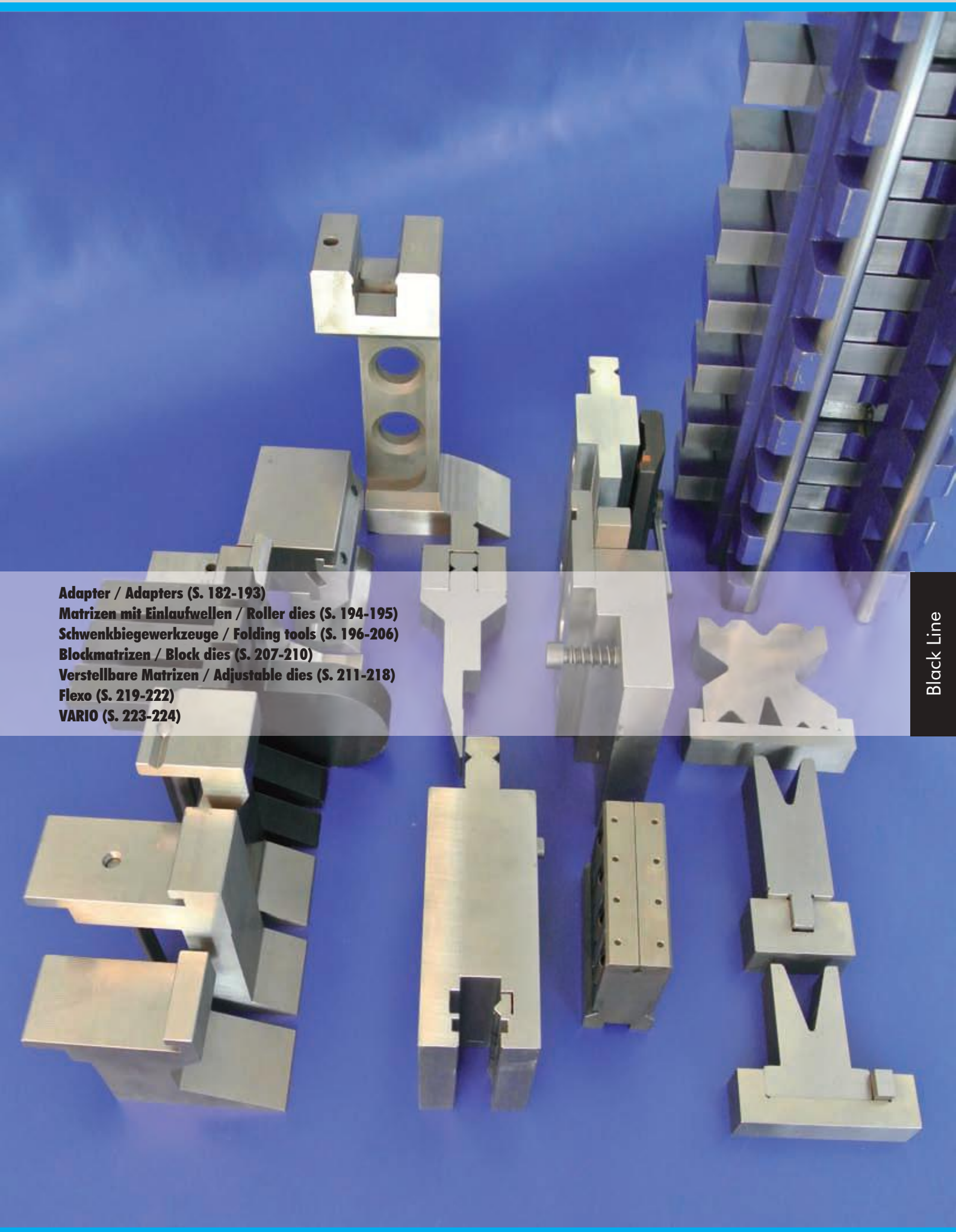
Characteristics:
- press brake tooling out of Ampco prevent the ferritistic
- abrasion on sheets of stainless stell for the industry of food.
- Therfore disapeares expensive refinishing at the sheets.





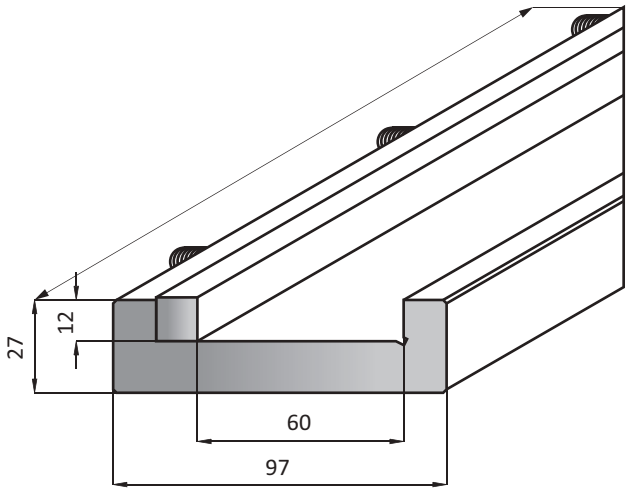


Ampco - Einsätze für Blockmatrizen oder auch für Steckmatrizen / Ampco - Deployment for block dies or plug-in dies too



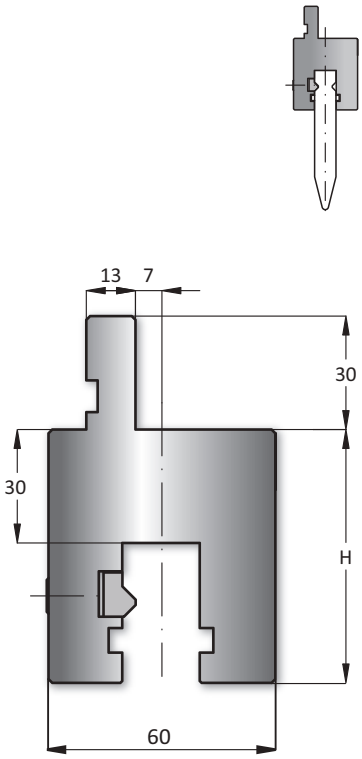
Adapter / Adapters (S. 182-193)
Matrizen mit Einlaufwellen / Roller dies (S. 194-195)
Schwenkbiegewerkzeuge / Folding tools (S. 196-206)
Blockmatrizen / Block dies (S. 207-210)
Verstellbare Matrizen / Adjustable dies (S. 211-218)
Flexo (S. 219-222)
VARIO (S. 223-224)

	L	T/mt	Mt
60.680	2100	100	I
60.681	2600	100	I
60.682	3100	100	I
60.683	4100	100	I



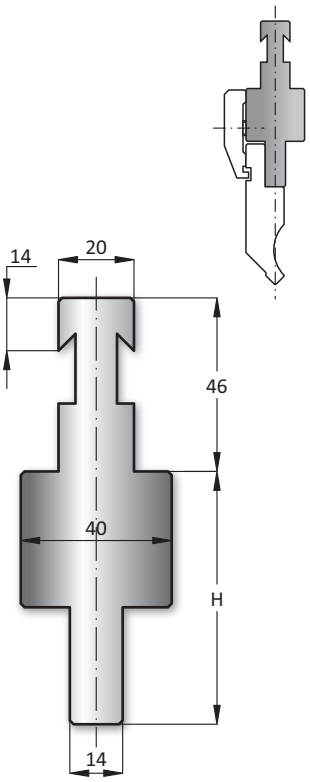
Halter -Holder

	L	H	T/mt	Mt
50.430	150	67.00	100	I



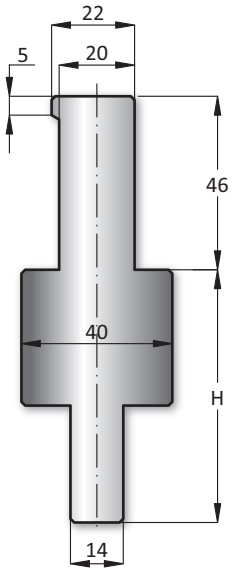
Amada/Wila Adapter

	L	H	T/mt	Mt
50.980	150	67.00	100	I



Beyeler-R Adapter

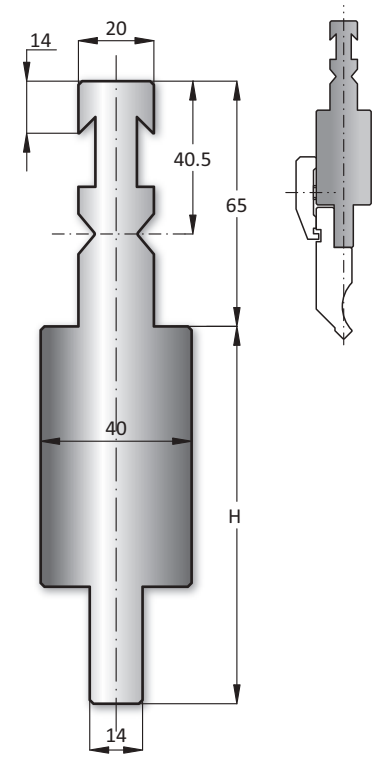
	L	H	T/mt	Mt
50.981	150	67.00	100	I



Beyeler-S Adapter

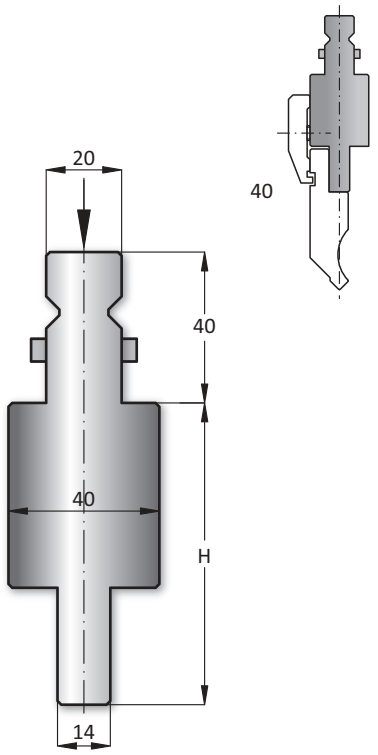
Black Line

	L	H	T/mt	Mt
50.983	150	100.00	100	I



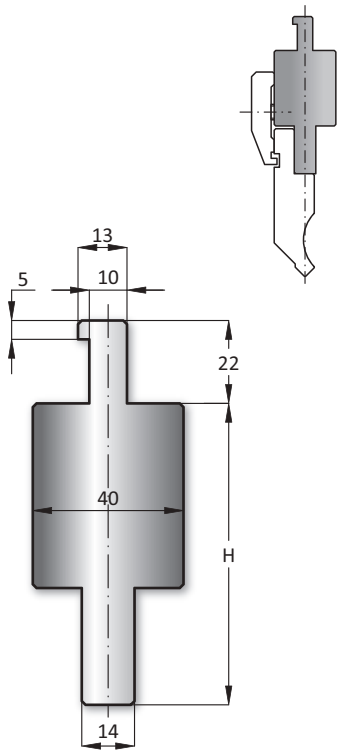
Beyeler RFA Adapter

	L	H	T/mt	Mt
50.970	150	80.00	100	I



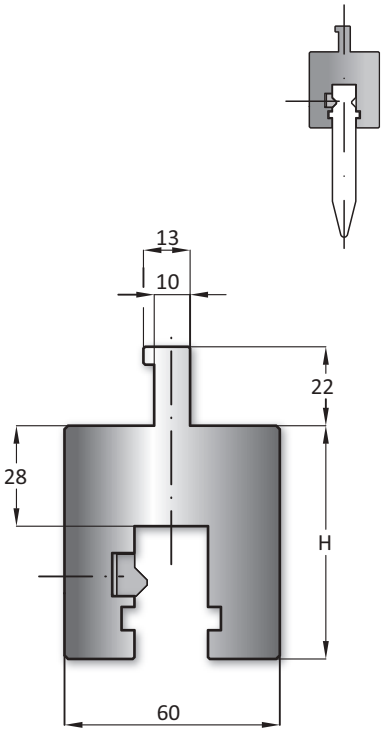
Wila/Trumpf Adapter

	L	H	T/mt	Mt
50.990	150	80.00	100	I



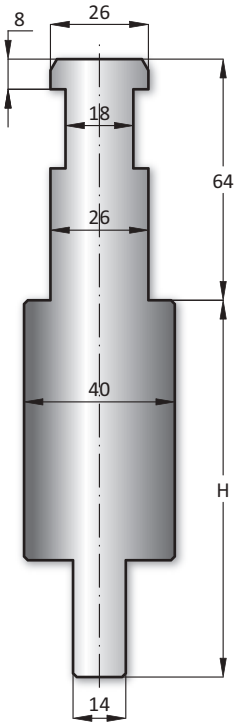
LVD Adapter

	L	H	T/mt	Mt
50.470	150	65.00	100	I



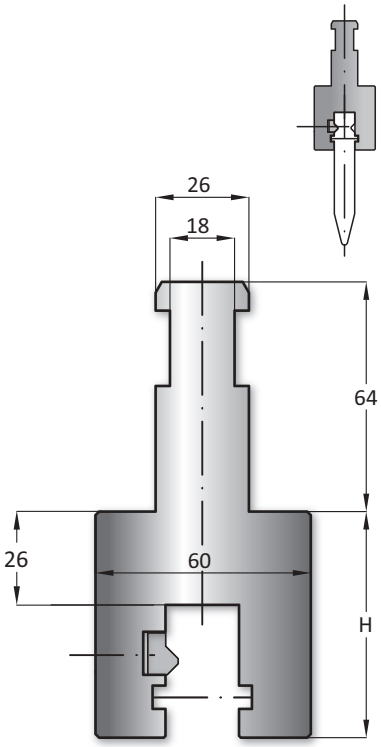
LVD/Wila-Trumpf Adapter

	L	H	T/mt	Mt
50.991	150	100.00	100	I



EHT Adapter

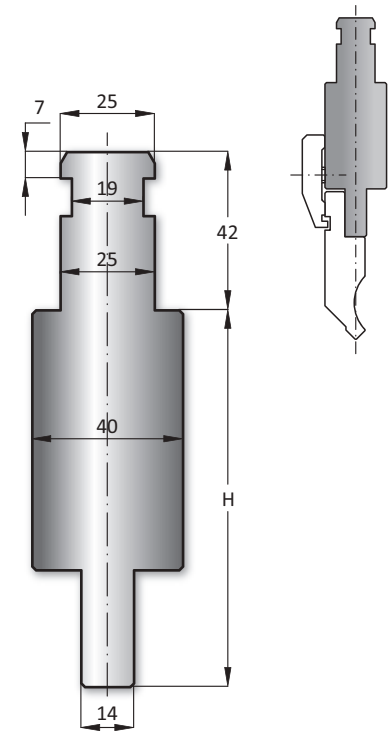
	L	H	T/mt	Mt
50.450	150	63.00	100	I



EHT/Wila-Trumpf Adapter

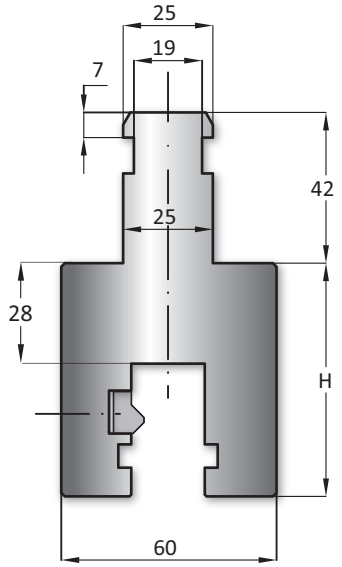
Black Line

	L	H	T/mt	Mt
50.993	150	100.00	100	I



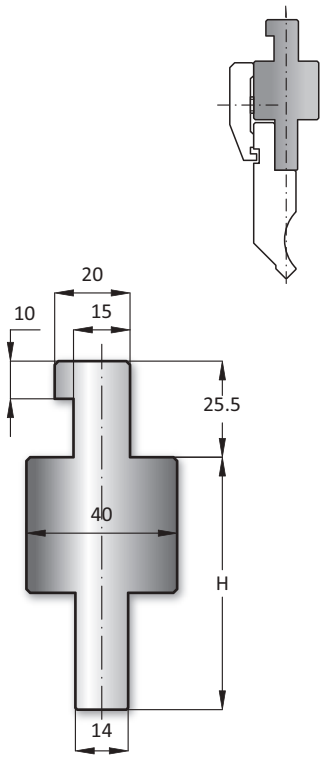
Weinbrenner Adapter

	L	H	T/mt	Mt
50.490	150	65.00	100	I



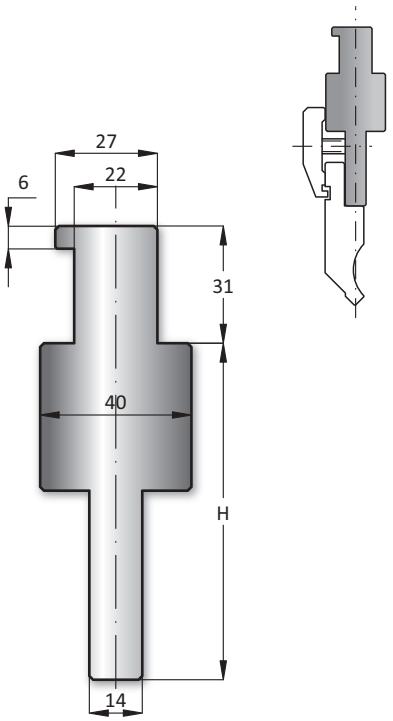
Weinbrenner/Wila-Trumpf Adapter

	L	H	T/mt	Mt
50.992	150	67.00	100	I



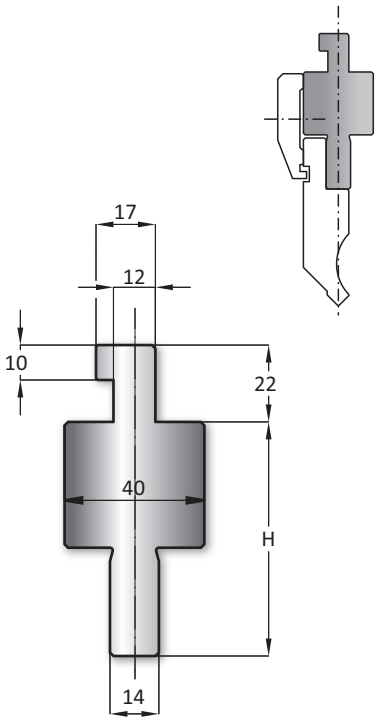
Durmazlar Adapter

	L	H	T/mt	Mt
50.996	150	89.00	100	I



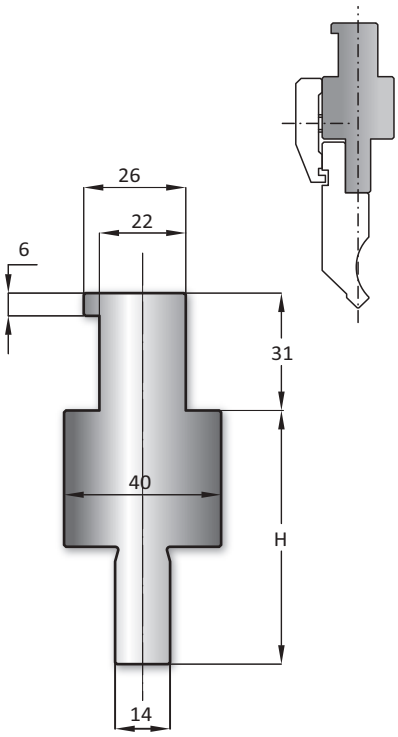
Baykal Adapter

	L	H	T/mt	Mt
50.998	150	67.00	100	I



Haco Adapter

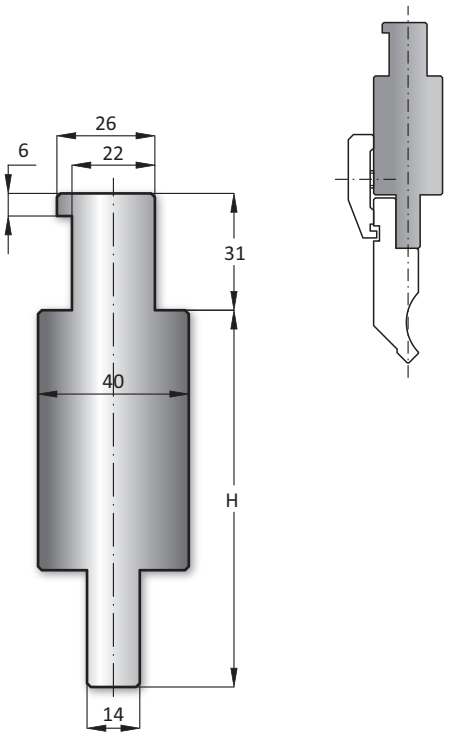
	L	H	T/mt	Mt
50.997	150	67.00	100	I



Darley Adapter

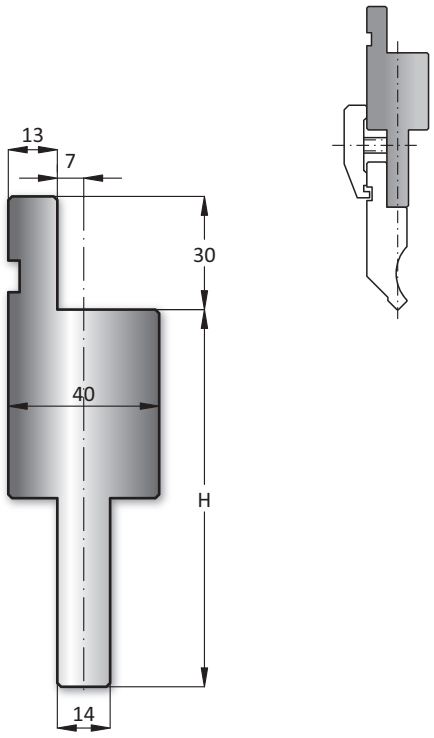
Black Line

	L	H	T/mt	Mt
50.994	150	100.00	100	1



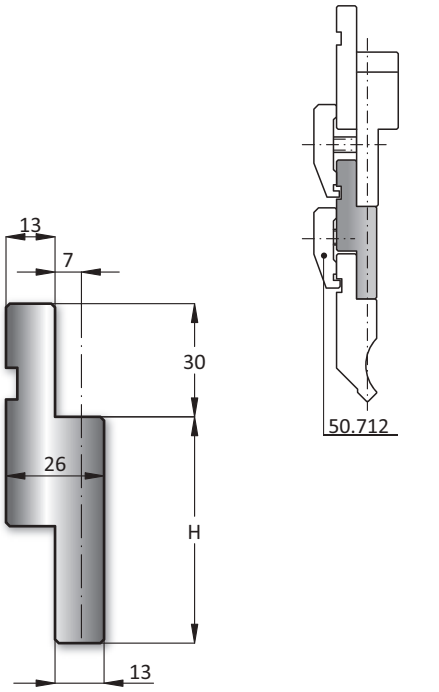
Darley Adapter

	L	H	T/mt	Mt
50.671	150	100.00	100	1



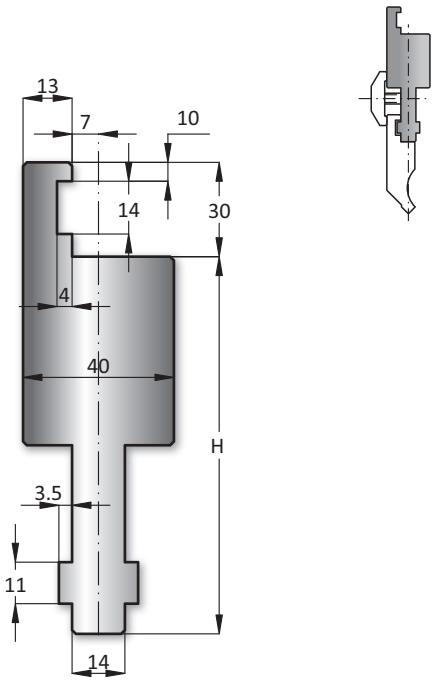
Verlängerung - Extension

	L	H	T/mt	Mt
50.959	150	60.00	100	1



Verlängerung - Extension

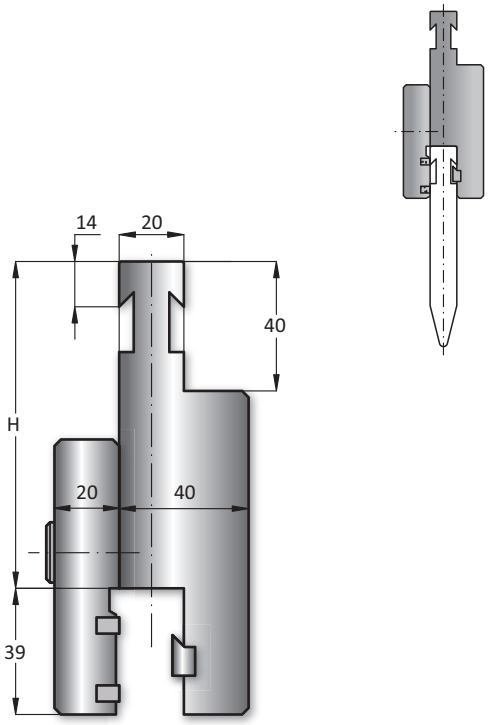
	L	H	T/mt	Mt
50.985	150	100.00	100	1



Verlängerung Beyeler - Extension Beyeler

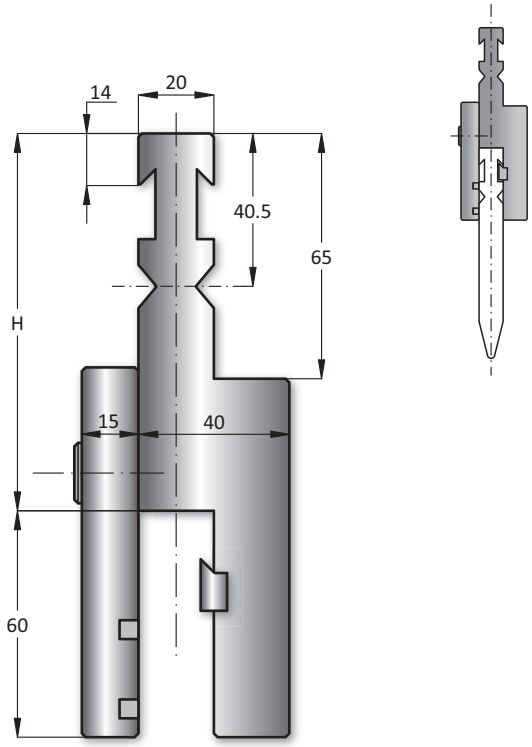
Black Line

	L	H	T/mt	Mt
50.982	150	101.00	100	I



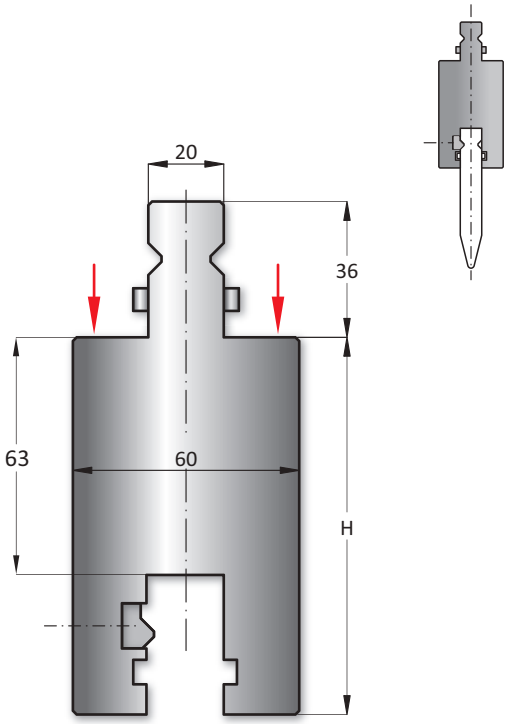
Verlängerung Beyeler-R - Extension Beyeler-R

	L	H	T/mt	Mt
50.400	150	100.00	100	I



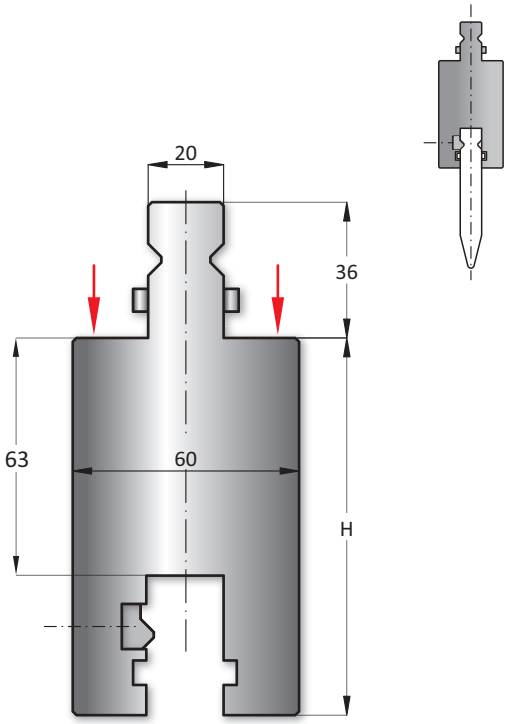
Verlängerung Beyeler RFA - Extension Beyeler RFA

	L	H	T/mt	Mt
50.410	150	100.00	100	I



Verlängerung Wila-Trump - Extension Wila-Trumpf

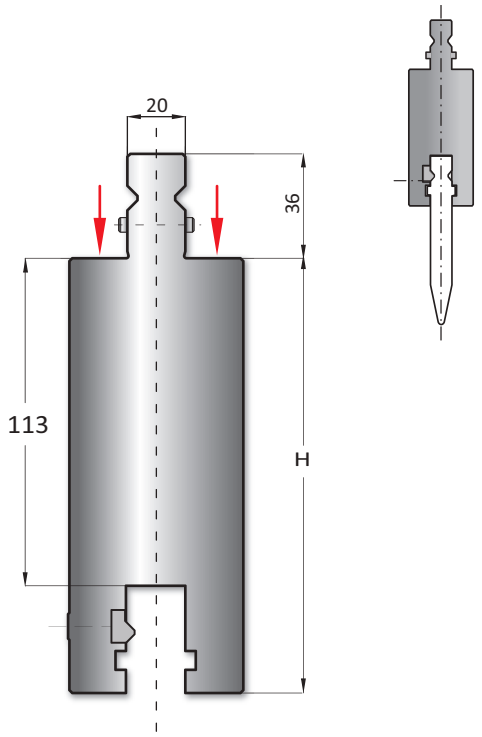
	L	H	T/mt	Mt
50.415	50	100.00	100	I



Verlängerung Wila-Trumpf - Extension Wila-Trumpf

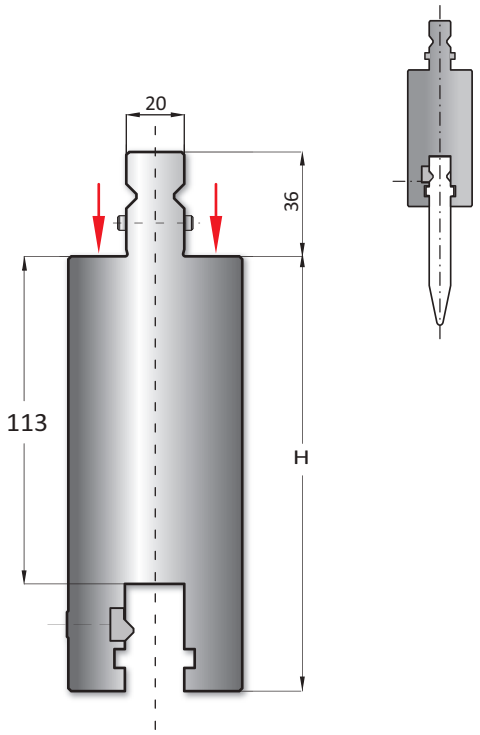
Black Line

	L	H	T/mt	Mt
50.445	50	150.00	100	I



Verlängerung Wila-Trump - Extension Wila-Trumpf

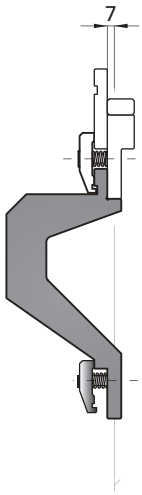
	L	H	T/mt	Mt
50.440	150	150.00	100	I

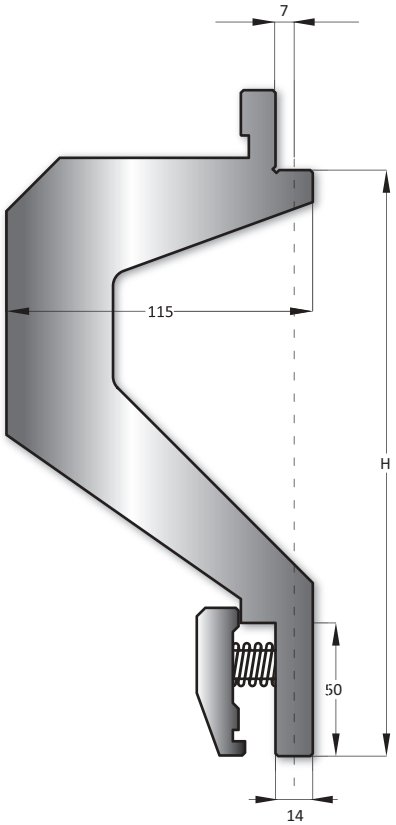


Verlängerung Wila-Trumpf - Extension Wila-Trumpf

Black Line

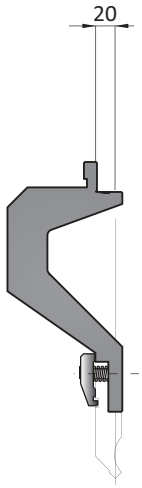
	L	H	T/mt	Mt
50.500	200	220.00	90	I

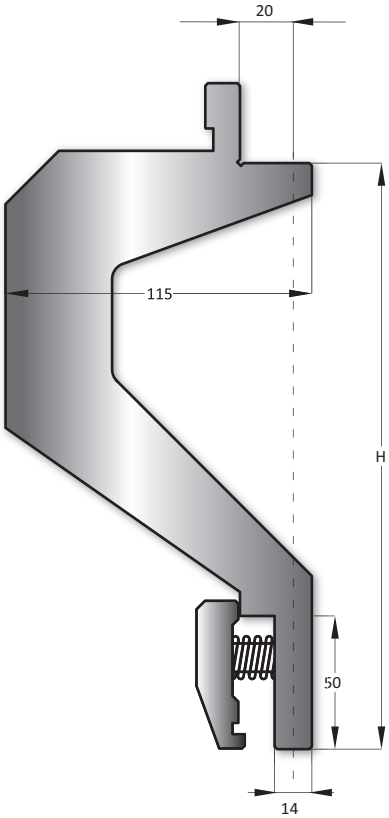




Verlängerung Amada - Extension Amada

	L	H	T/mt	Mt
50.501	200	220.00	90	I

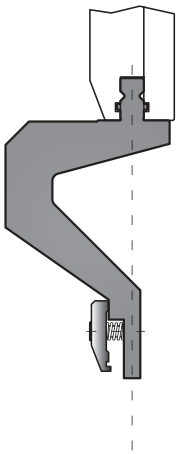


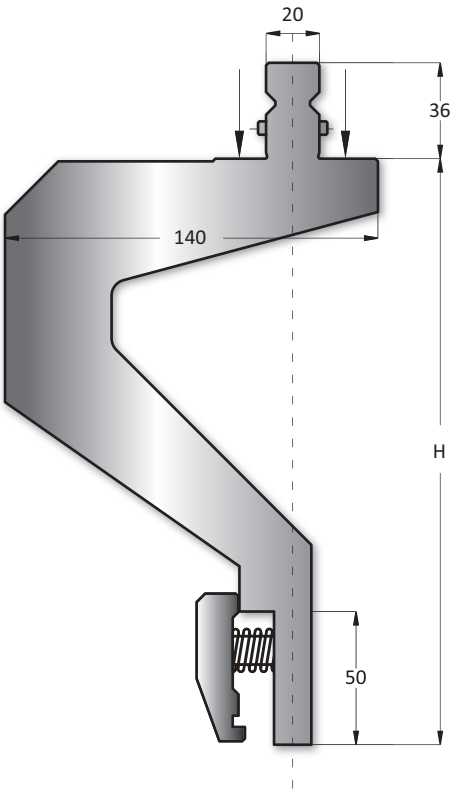


Verlängerung Amada - Extension Amada

Black Line

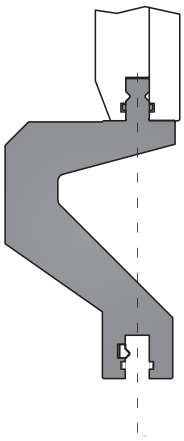
	L	H	T/mt	Mt
50.502	200	220	90	I

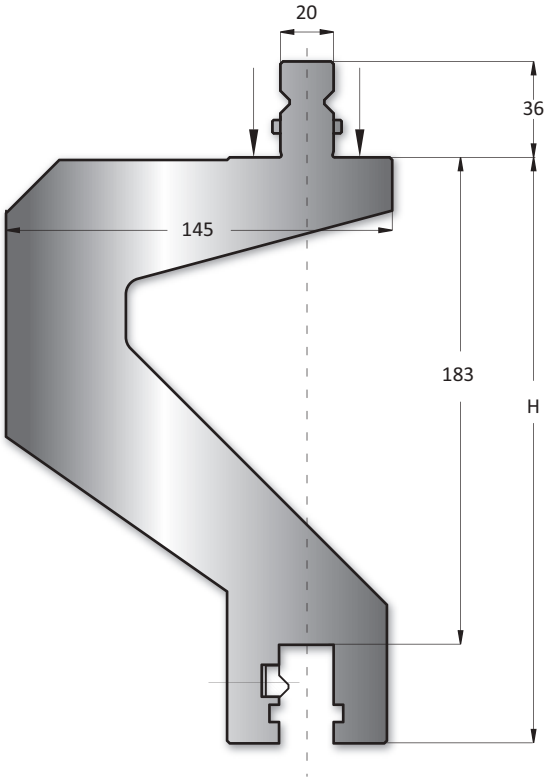




Wila-Trumpf Adapter

	L	H	T/mt	Mt
50.503	200	220.00	90	I

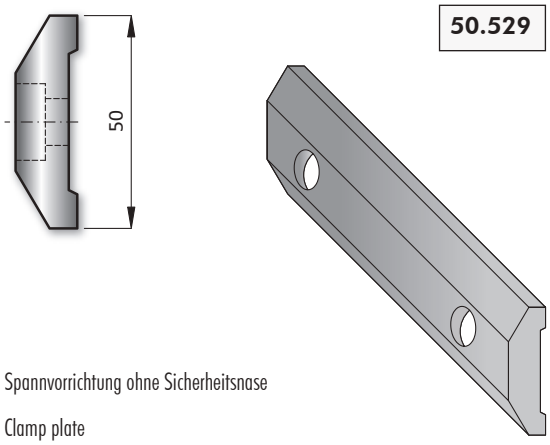




Wila-Trumpf Adapter

Black Line

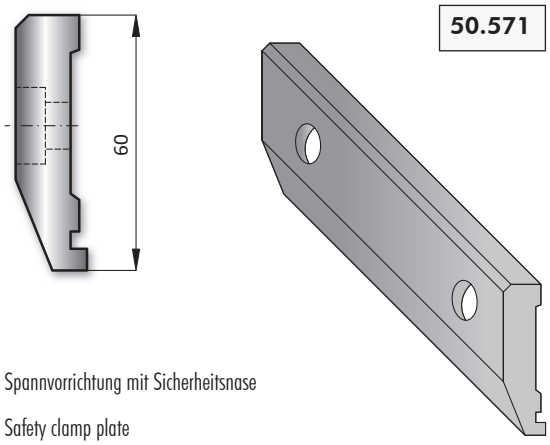
50.529



Spannvorrichtung ohne Sicherheitsnase

Clamp plate

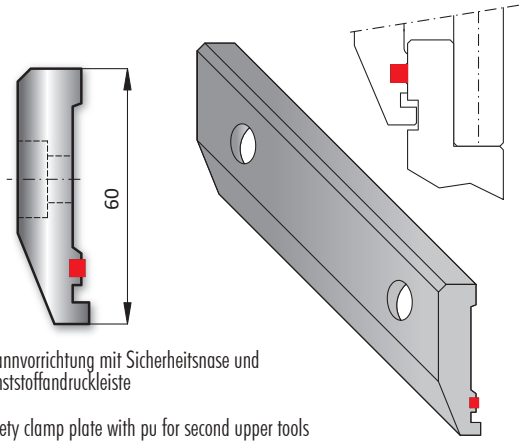
50.571



Spannvorrichtung mit Sicherheitsnase

Safety clamp plate

50.910



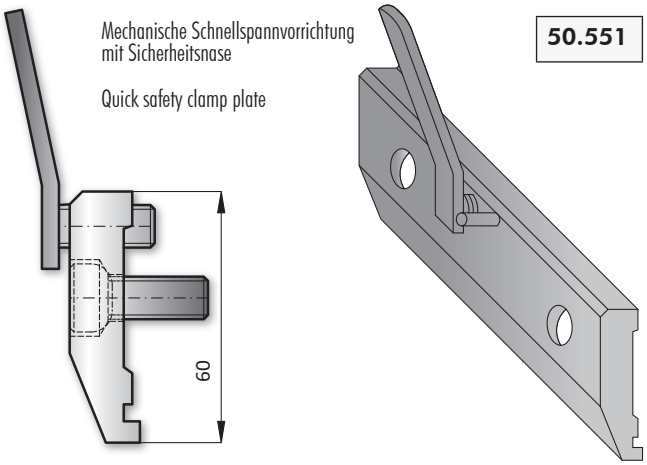
Spannvorrichtung mit Sicherheitsnase und Kunststoffandruckleiste

Safety clamp plate with pu for second upper tools

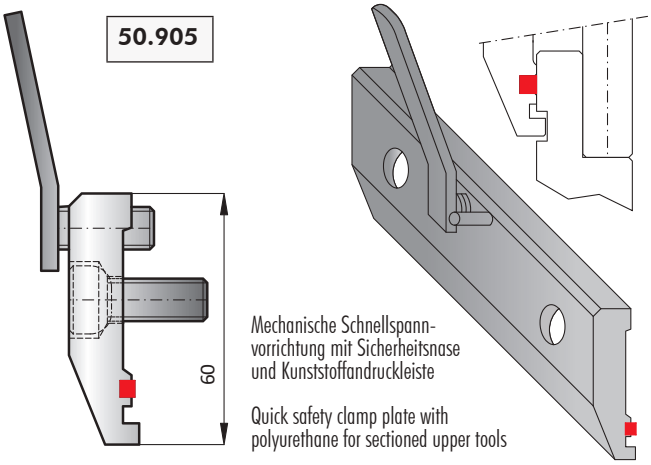
50.551

Mechanische Schnellspannvorrichtung mit Sicherheitsnase

Quick safety clamp plate



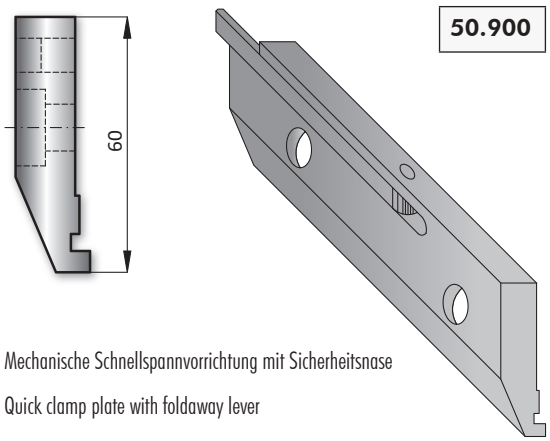
50.905



Mechanische Schnellspann-vorrichtung mit Sicherheitsnase und Kunststoffandruckleiste

Quick safety clamp plate with polyurethane for sectioned upper tools

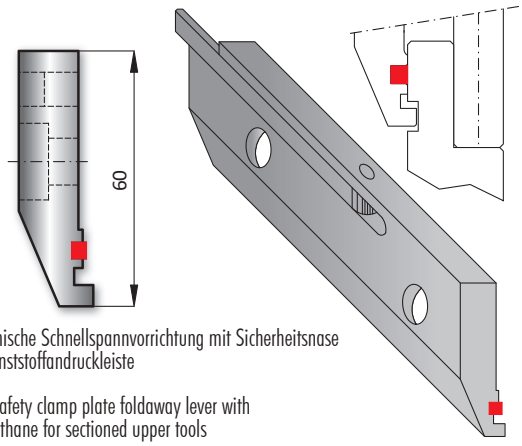
50.900



Mechanische Schnellspannvorrichtung mit Sicherheitsnase

Quick clamp plate with foldaway lever

50.903

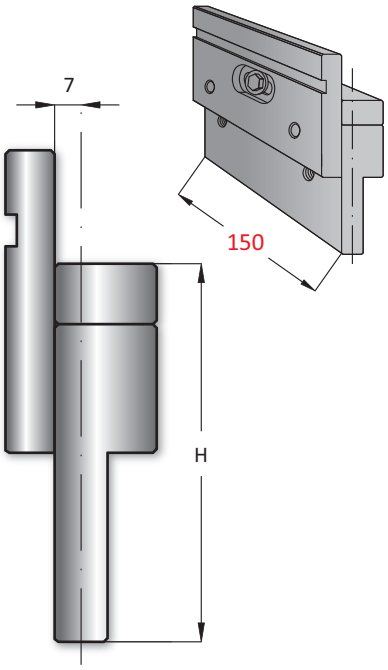


Mechanische Schnellspannvorrichtung mit Sicherheitsnase und Kunststoffandruckleiste

Quick safety clamp plate foldaway lever with polyurethane for sectioned upper tools

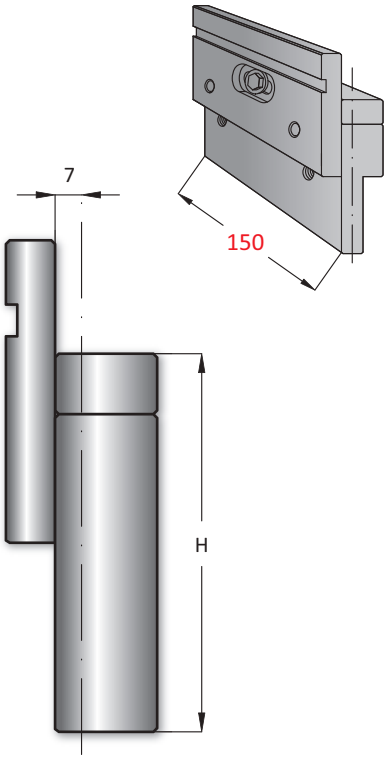
Black Line

	L	H	T/mt	Mt
50.666	150	100.00	100	I
50.668	150	120.00	100	I
50.512	150	150.00	100	I



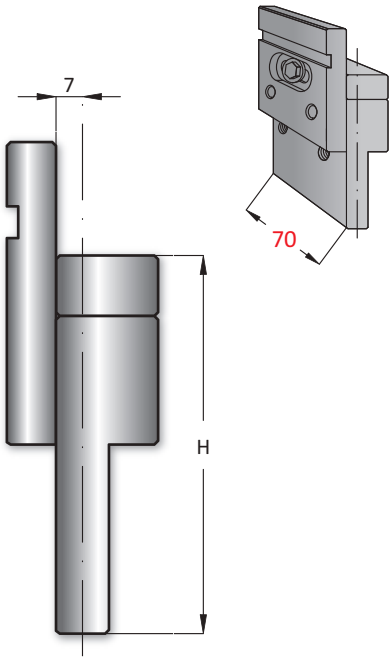
Spannvorrichtung nicht enthalten
Clamp not included

	L	H	T/mt	Mt
50.674	150	120.00	100	I



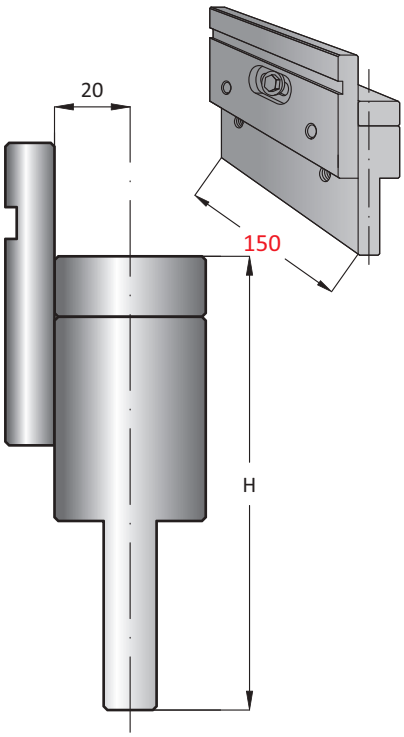
Spannvorrichtung nicht enthalten
Clamp not included

	L	H	T/mt	Mt
50.705	70	100.00	100	I
50.706	70	120.00	100	I
50.708	70	150.00	100	I



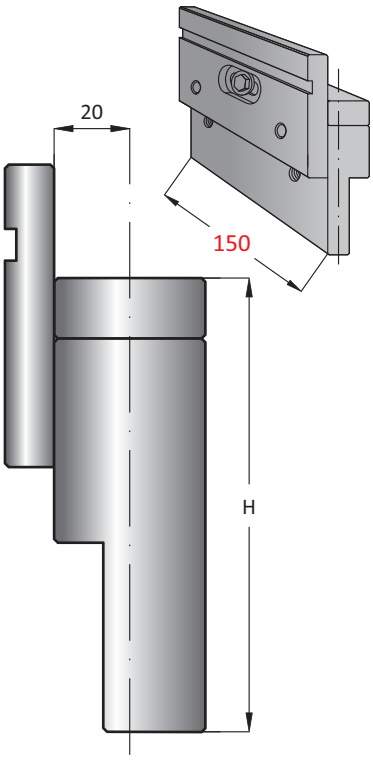
Spannvorrichtung nicht enthalten
Clamp not included

	L	H	T/mt	Mt
50.667	150	120.00	100	I
50.669	150	150.00	100	I



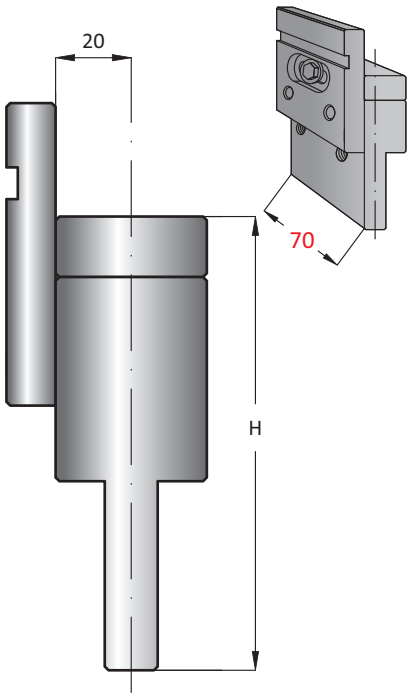
Spannvorrichtung nicht enthalten
Clamp not included

	L	H	T/mt	Mt
50.673	150	120.00	100	I



Spannvorrichtung nicht enthalten
Clamp not included

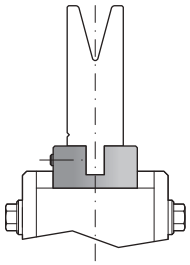
	L	H	T/mt	Mt
50.707	70	120.00	100	I
50.710	70	15.00	100	I

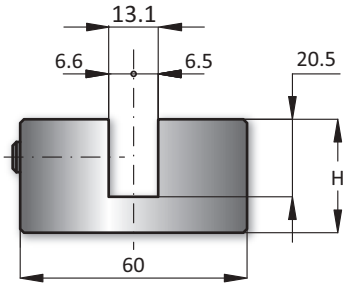


Spannvorrichtung nicht enthalten
Clamp not included

Black Line

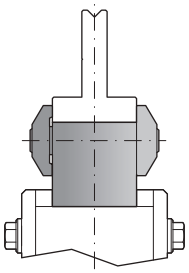
	L	H	T/mt	Mt
60.910	1000	30.00	100	I

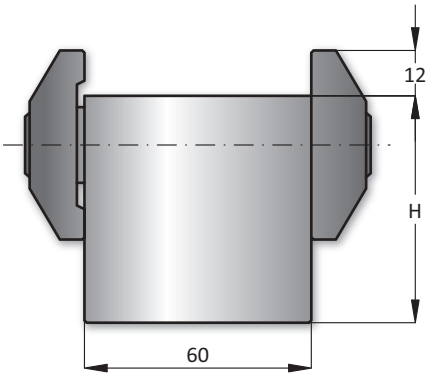




Beyeler-Trumpf Adapter

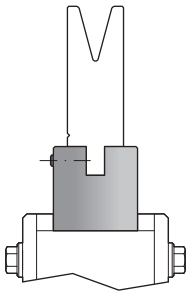
	L	H	T/mt	Mt
60.919	835	55.00	100	I

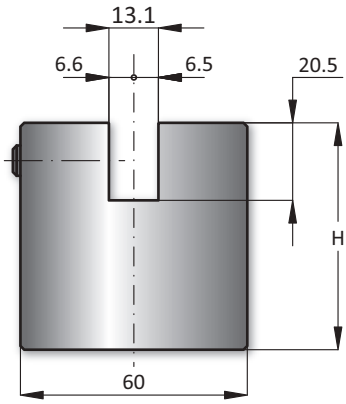




Amada Adapter

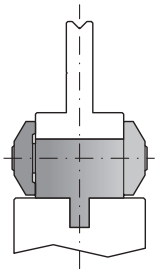
	L	H	T/mt	Mt
60.920	1000	60.00	100	I

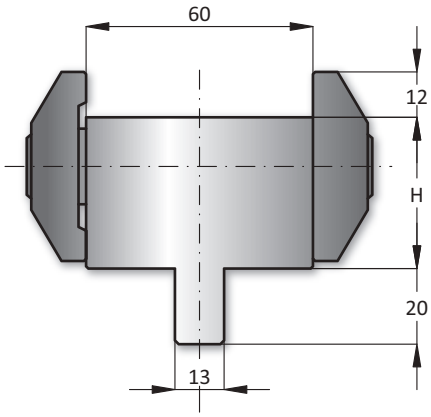




Amada-Beyeler/Trumpf Adapter

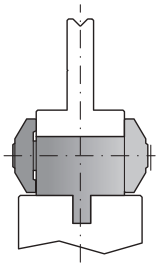
	L	H	T/mt	Mt
60.925	835	40.00	100	I

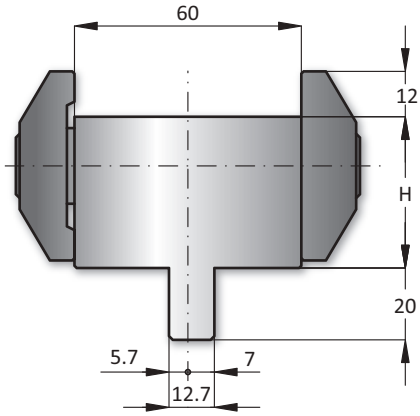




Beyeler/Trumpf Adapter

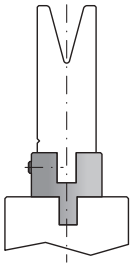
	L	H	T/mt	Mt
60.930	835	40.00	100	I

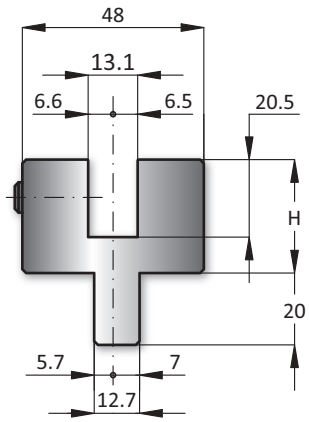




LVD-Amada Adapter

	L	H	T/mt	Mt
60.935	1000	30.00	100	I

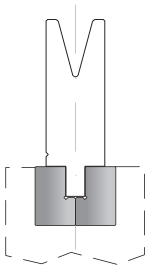


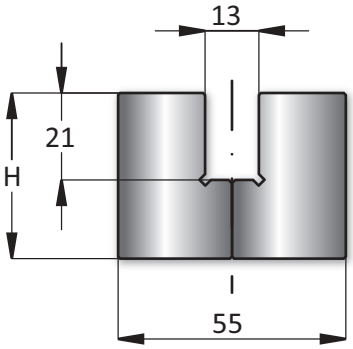


LVD-Beyeler/Trumpf Adapter

Black Line

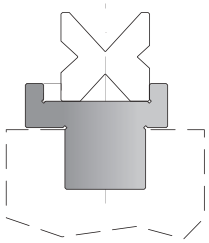
	L	H	T/mt	Mt
60.940	500	40.00	100	I

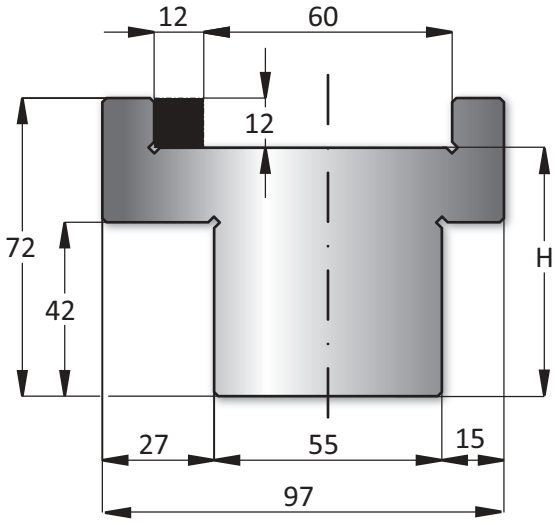




Wila-EHT Adapter

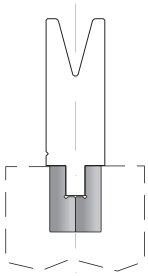
	L	H	T/mt	Mt
60.945	835	60.00	100	I

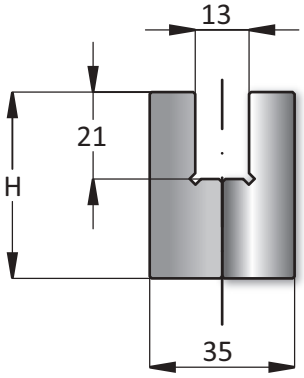




Amada-EHT Adapter

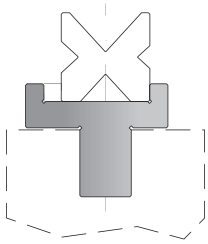
	L	H	T/mt	Mt
60.950	500	45.00	100	I

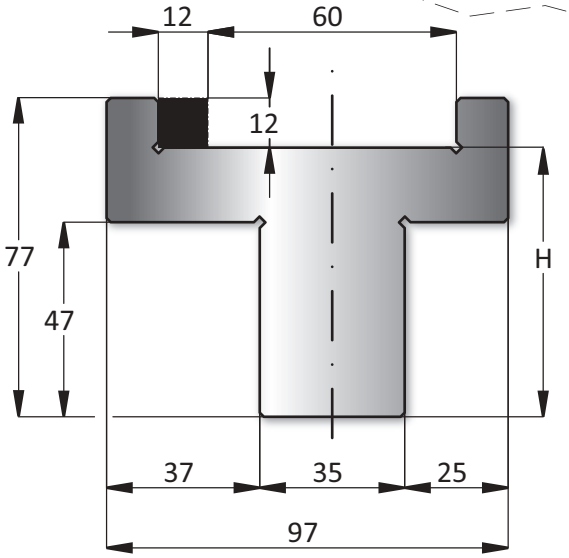




Wila-Weinbrenner Adapter

	L	H	T/mt	Mt
60.955	835	65.00	100	I



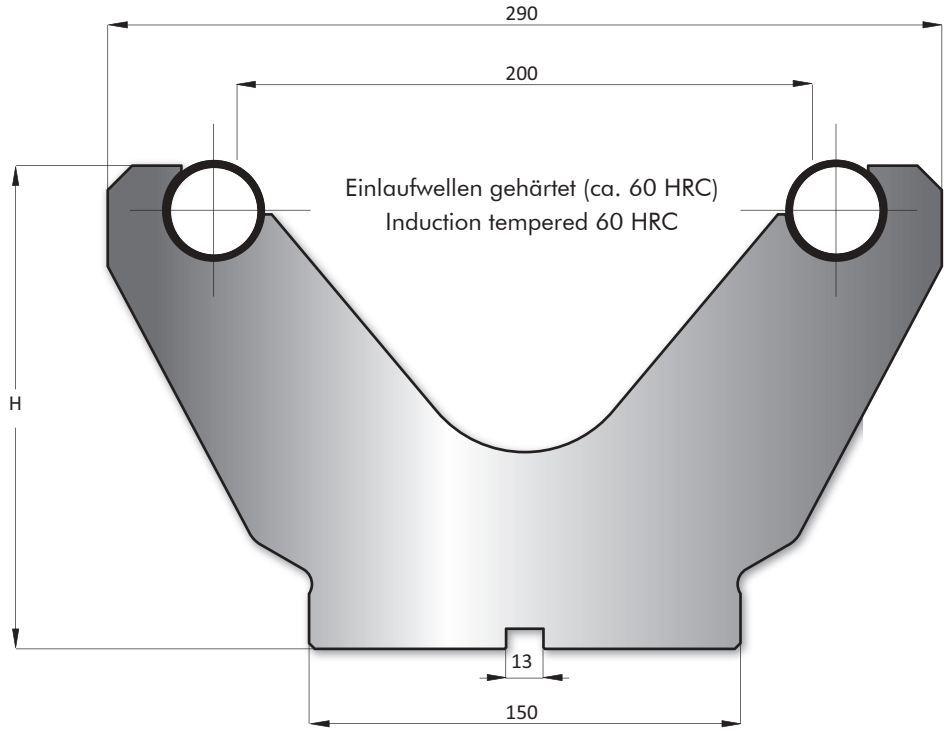


Amada-Weinbrenner Adapter

Black Line

	α	H	T/mt	Mt
20.720	80°	170.00	200	I

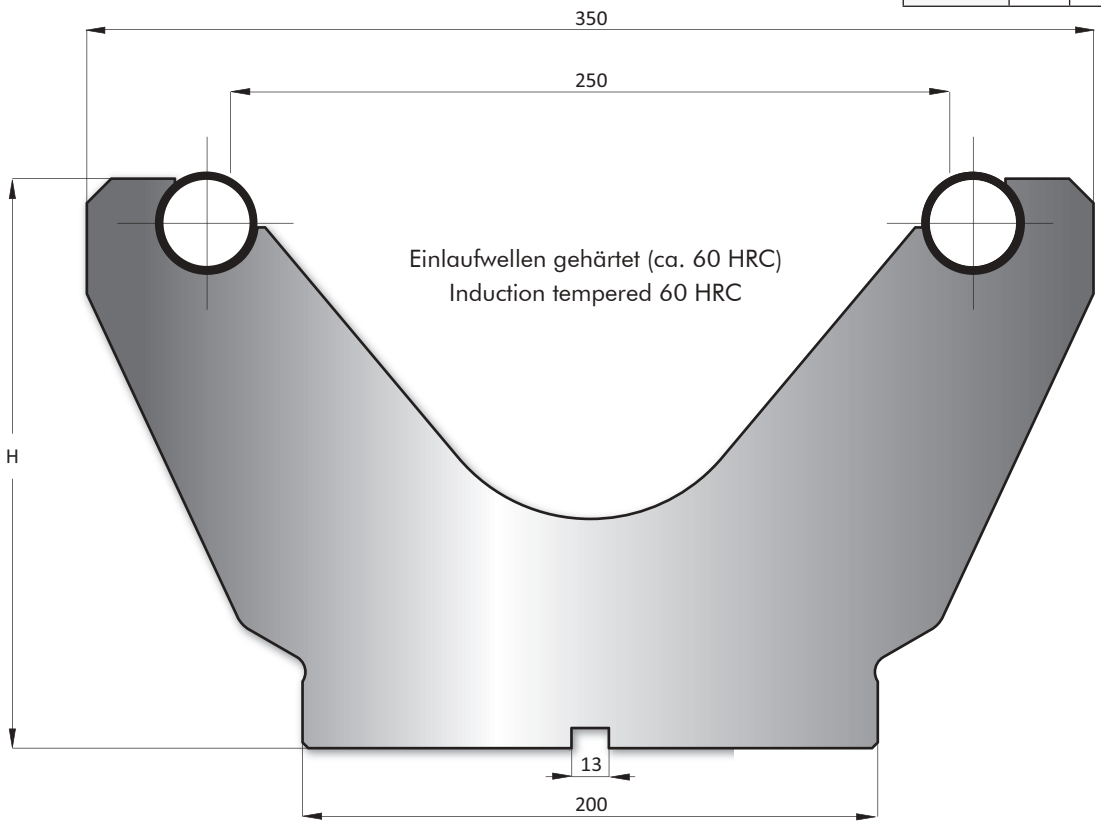
100 mm



80°

	α	H	T/mt	Mt
20.725	80°	200.00	200	I

100 mm

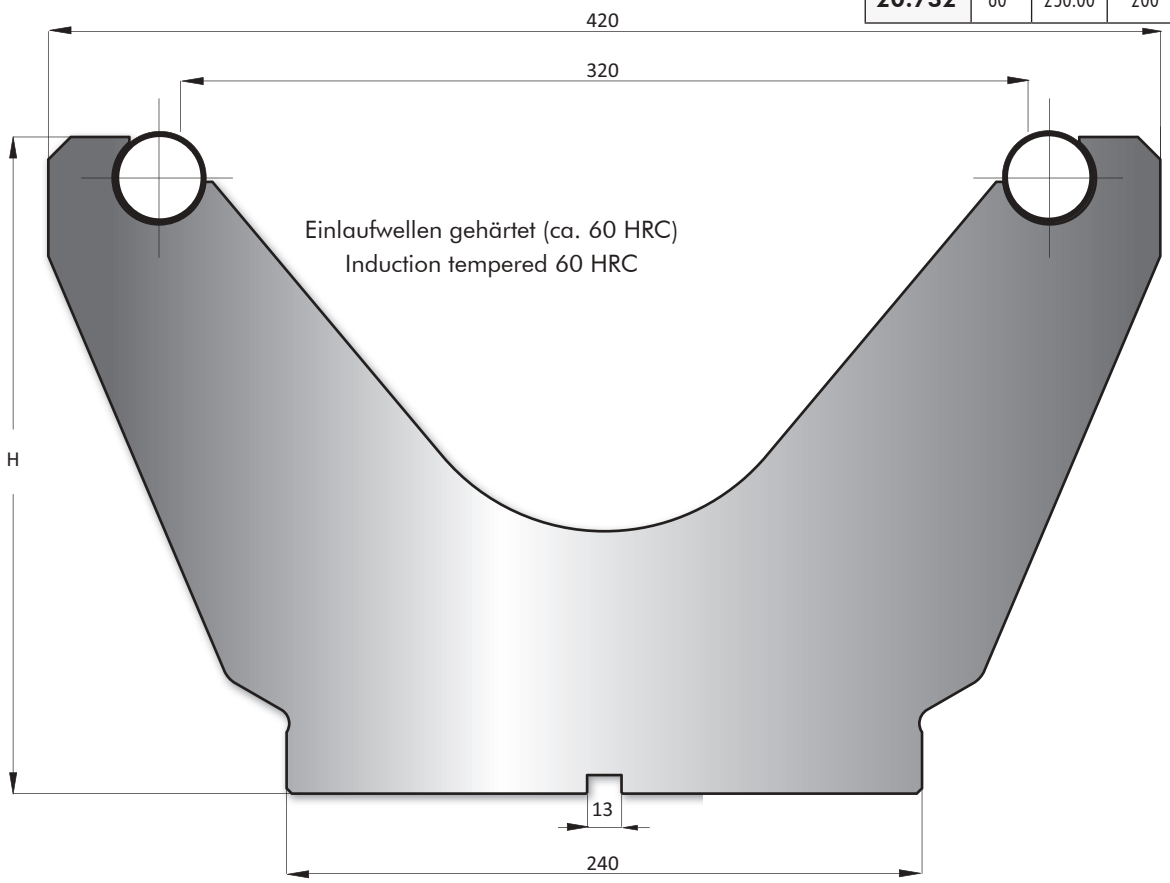


80°

Black Line

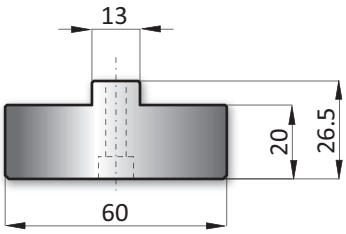
100 mm

	α	H	T/mt	Mt
20.732	80°	250.00	200	I



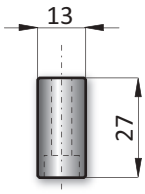
80°

100 mm **20.701**



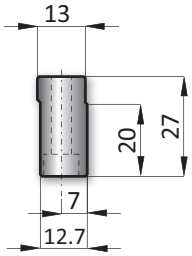
Amada

100 mm **20.703**



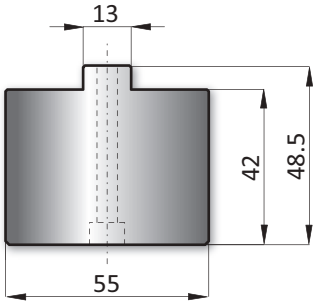
Beyeler / Trumpf

100 mm **20.705**



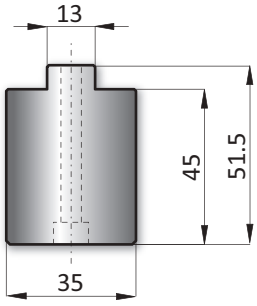
LVD

100 mm **20.707**



EHT

100 mm **20.709**

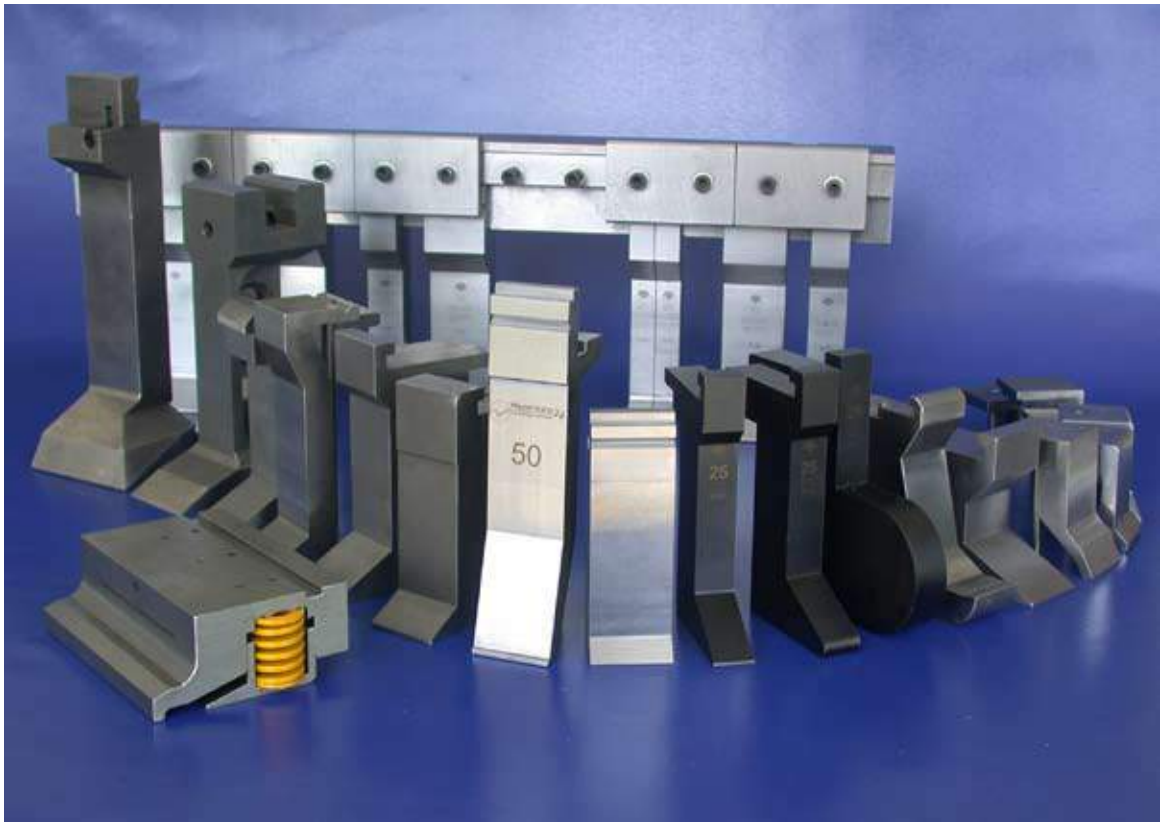


Weinbrenner

Black Line

Schwenkbiegewerkzeug

Special Foldingtools



Oberwerkzeuge für Ihre Schwenkbiegemaschine... / Upper tools for your folding machine...

Westermann24 liefert Ihnen Schwenkbiegewerkzeuge für Ihre Maschine.
Sie bekommen von uns Werkzeuge in geschlichteter und geschliffener Ausführung.
Entsprechend der gewünschten Verschleißfestigkeit bietet Westermann24 verschiedene Qualitäten in vergüteter oder gehärteter Ausführung an.

Westermann24 delivers special folding tools for your machine.
You will get paint coated and grinded tools.
According the order wearing stability Westermann24 offers different quality levels determined orhardened.

... oder Standardwerkzeuge. /
... or conventional tools.

Maschinenanschläge bis 6500mm /
keystrokes tills 6500 mm

Adapterschiene für geteilte Werkzeuge /
adaptor rail for divides tools

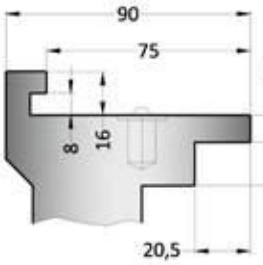
Black Line

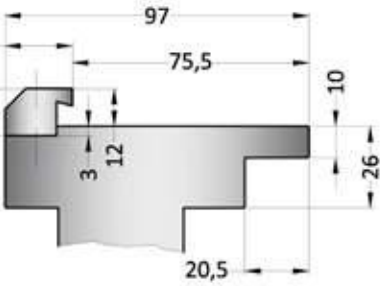
Schwenkbiegewerkzeug

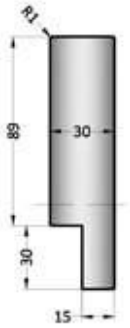
direkt einsetzbar auf Schwenkbiegemaschinen von:

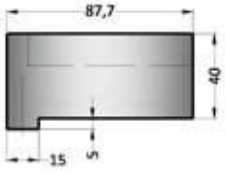
Special Foldingtools

directly able to work on folding machines of:

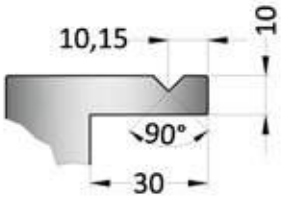








Fasti



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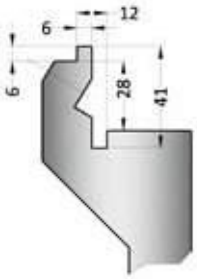

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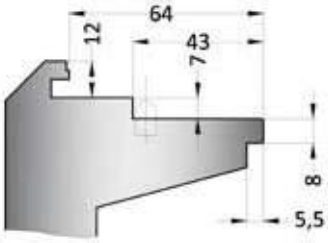
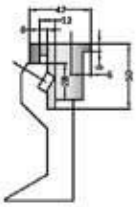
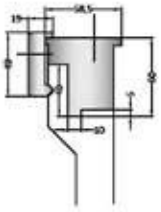
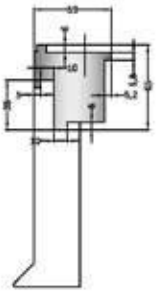


RAS

Lotze







modifiziert für Ihre Maschine / modified for your machine

Material:
Westermann24 nutzt die vielfältigen Möglichkeiten der Werkstoffkunde, um Ihnen bestmögliche Qualität zu garantieren.

Verwendeter Werkstoff ist:
- 1.2312, vergütet auf 1000-1200N/mm²

Ausführung wahlweise:
gefräst, geschliffen oder zusätzlich gehärtet

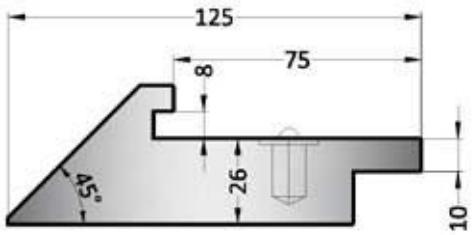
material:
Westermann24 uses the many possibilities of the material engeeniering, to guarantee best quality.

used materials are:
- 1.2312 , tempered to 1000-1200N/mm²

Design optional:
Milled, grinded or additional hardened

Black Line

4.01.001



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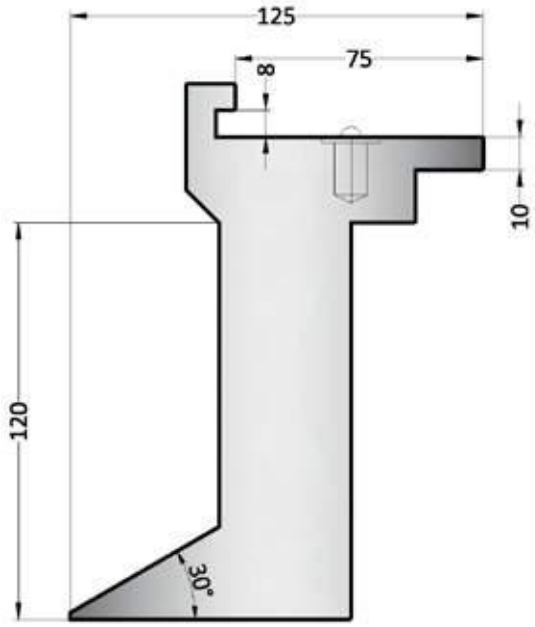

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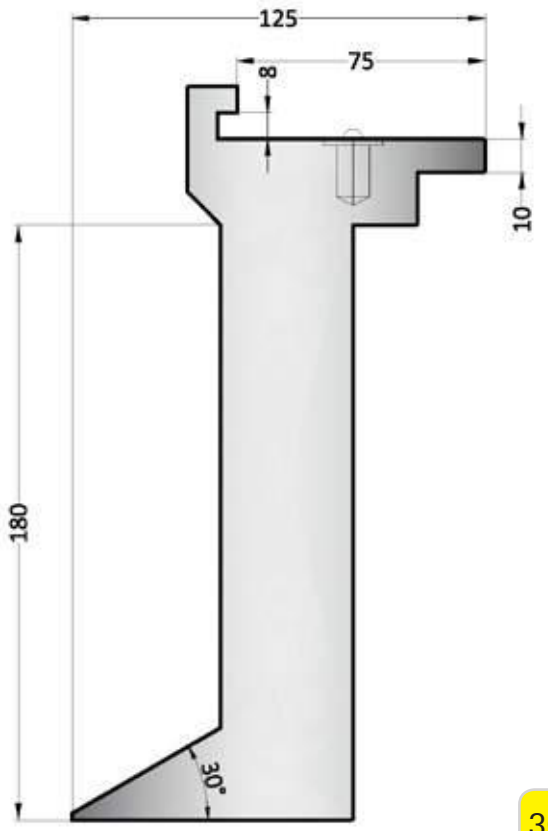

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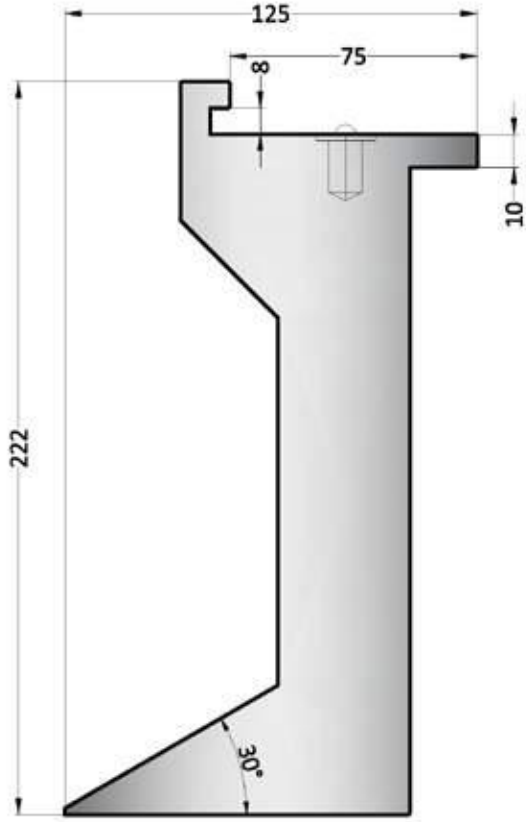

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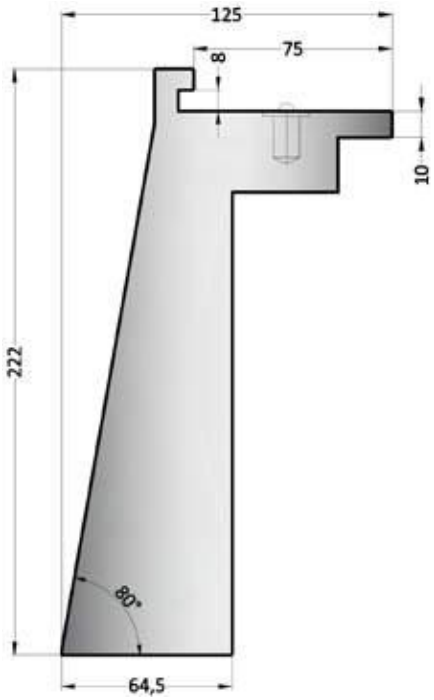

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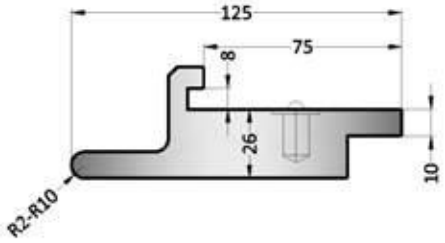

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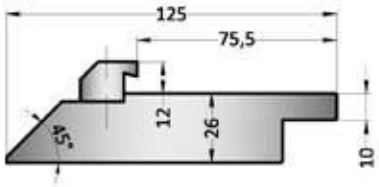

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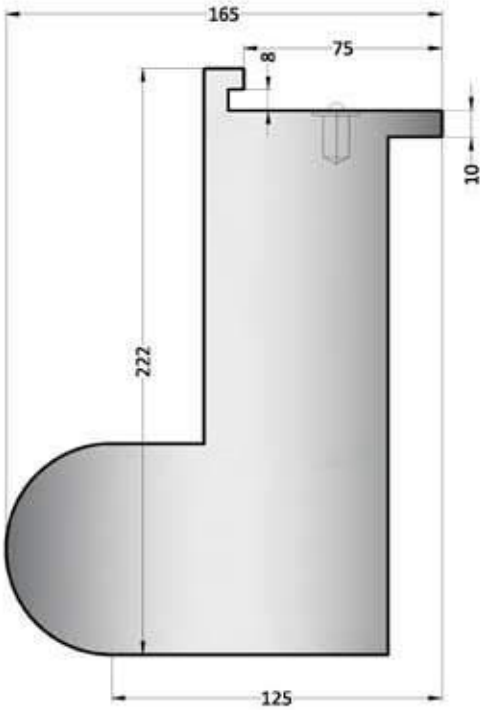

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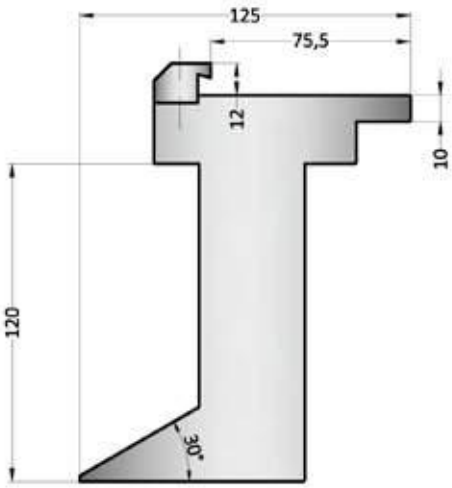

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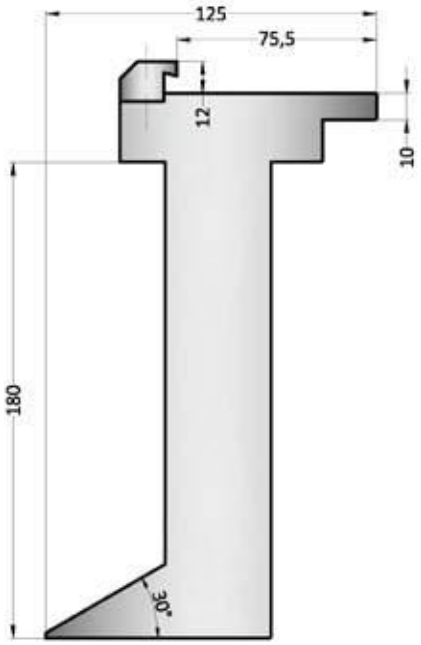

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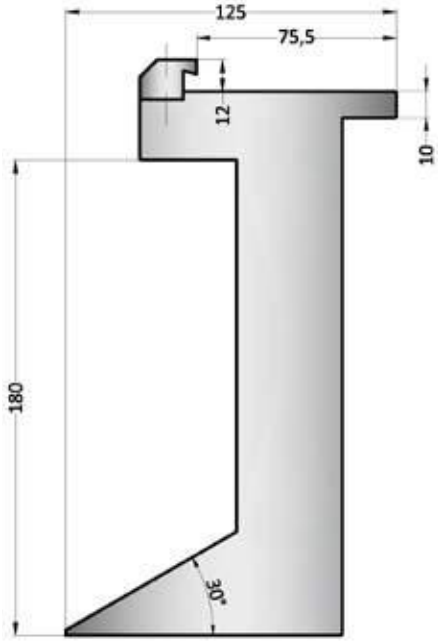

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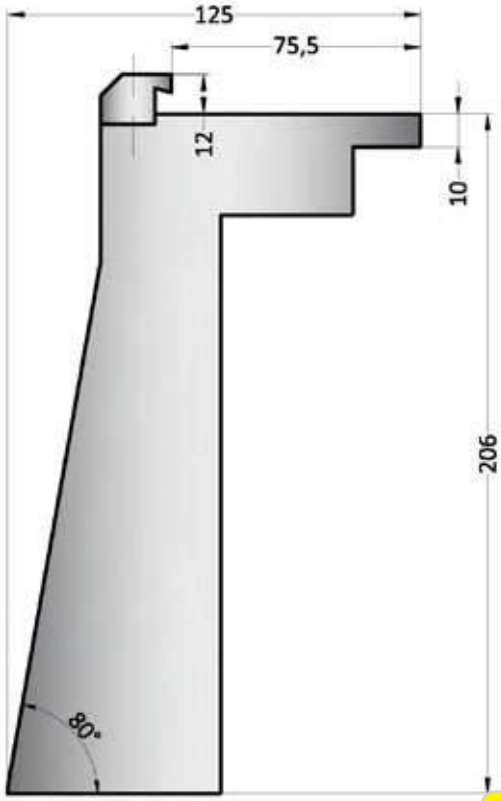

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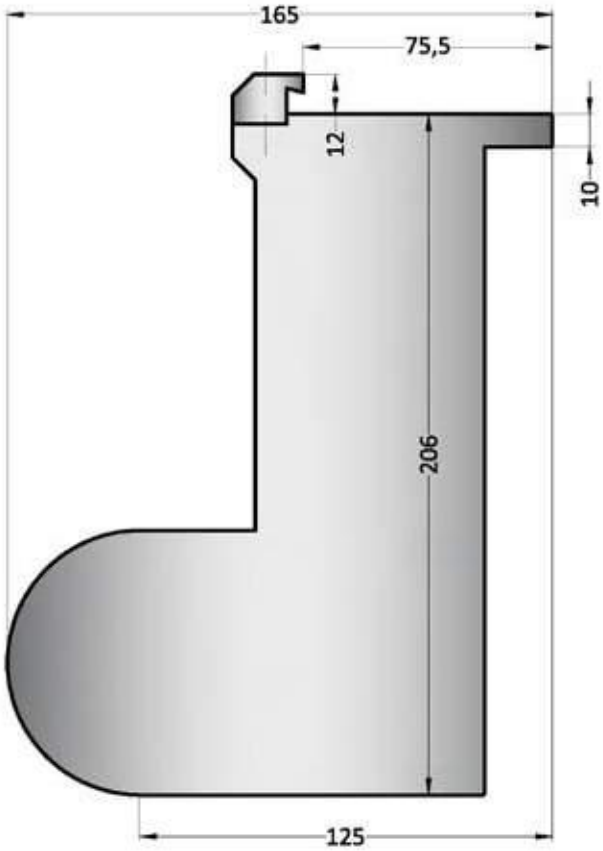

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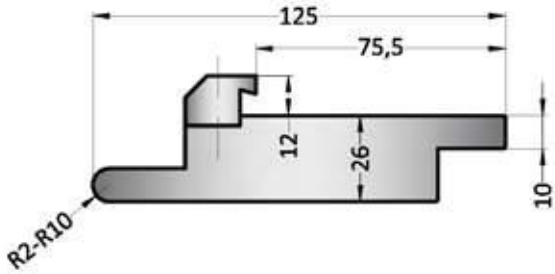

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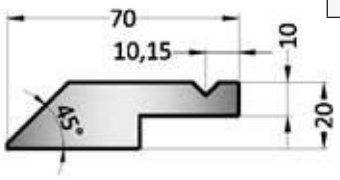

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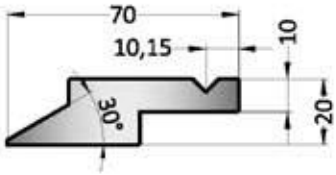

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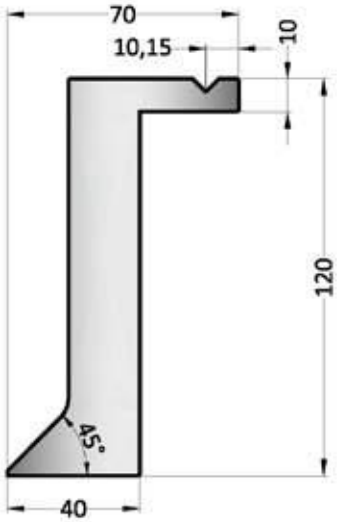

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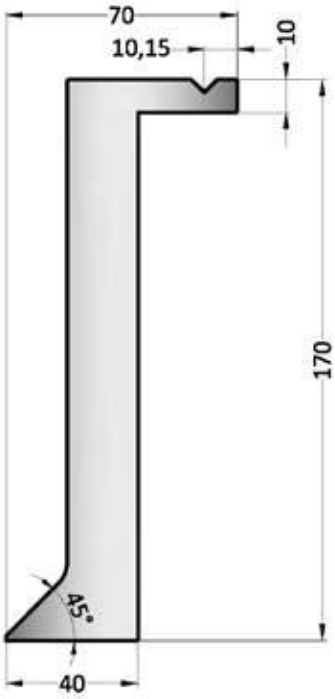

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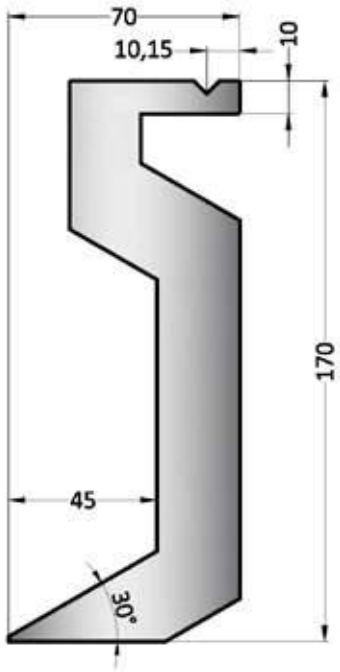

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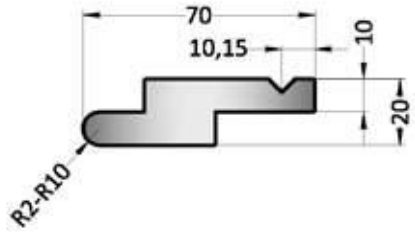

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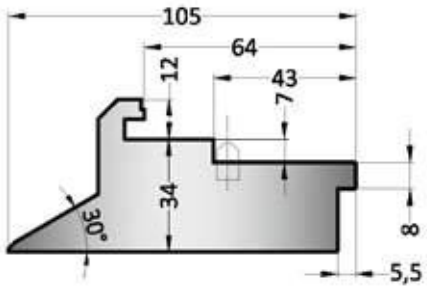

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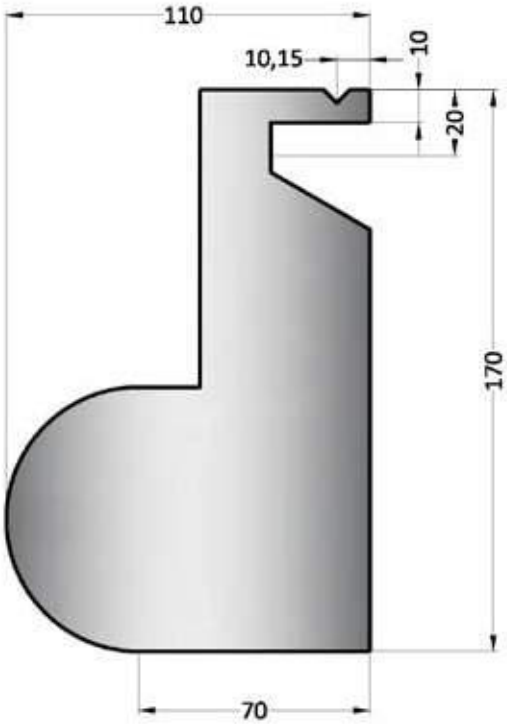

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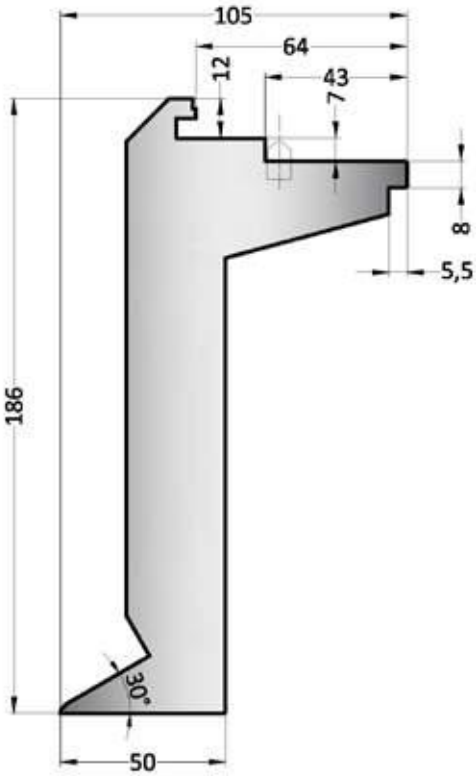

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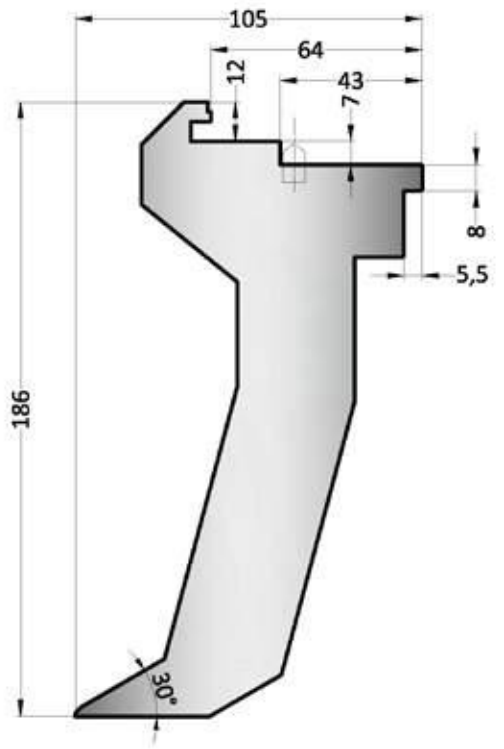

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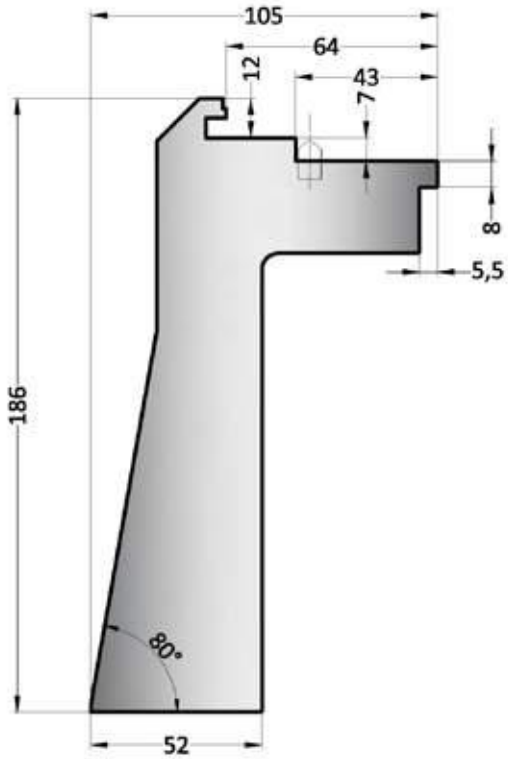

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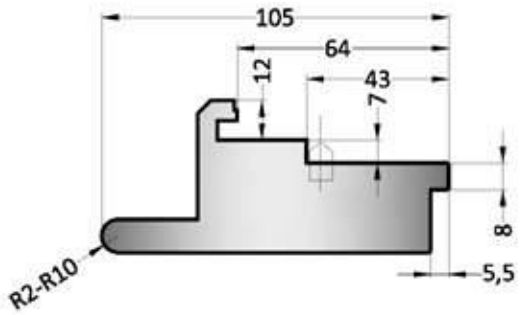

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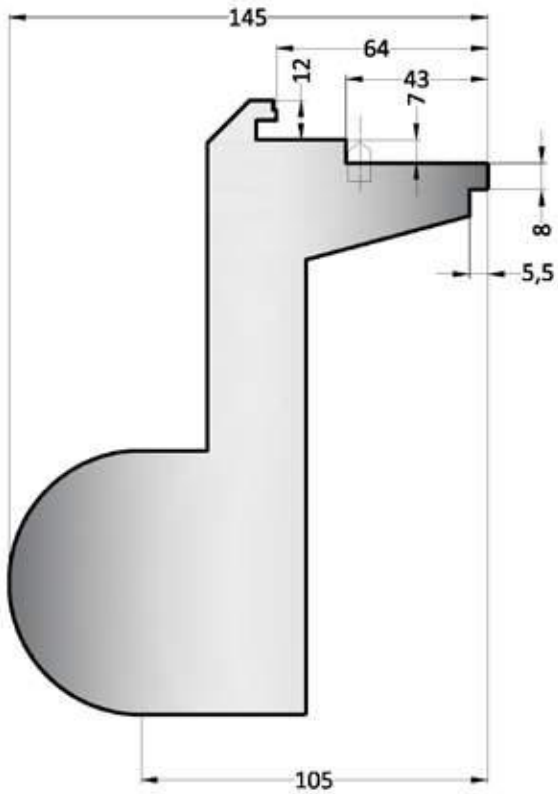

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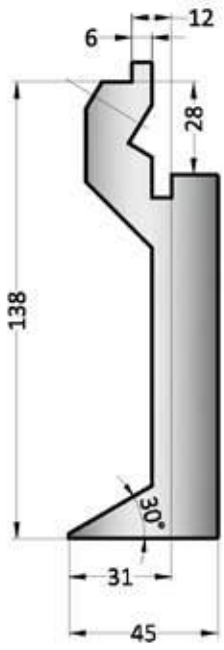

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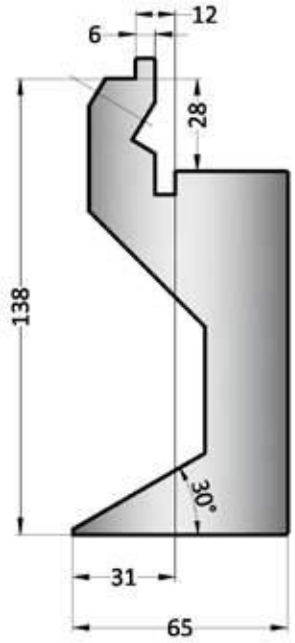

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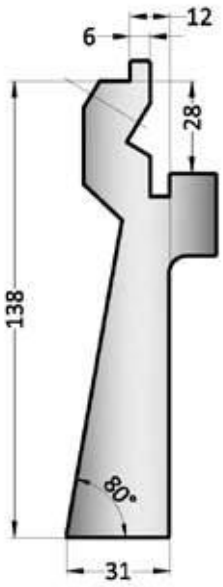

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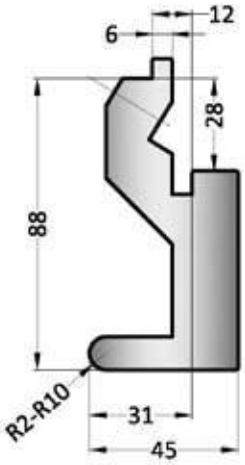

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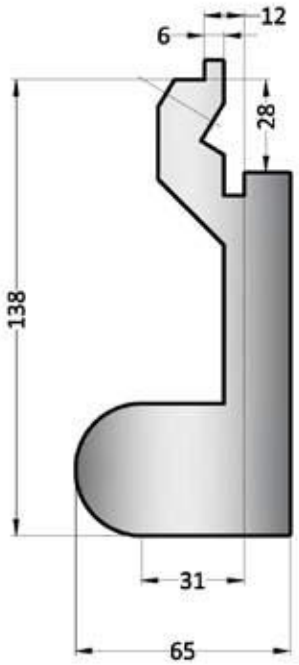

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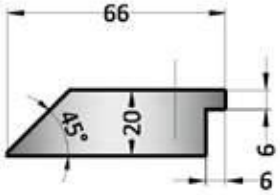

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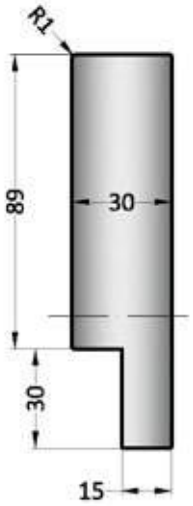

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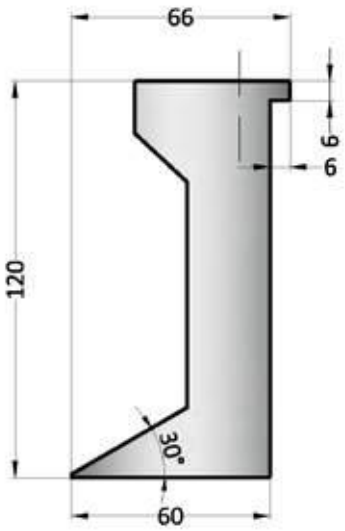

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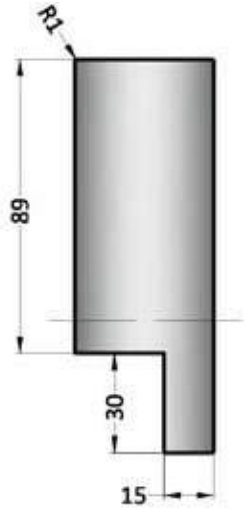

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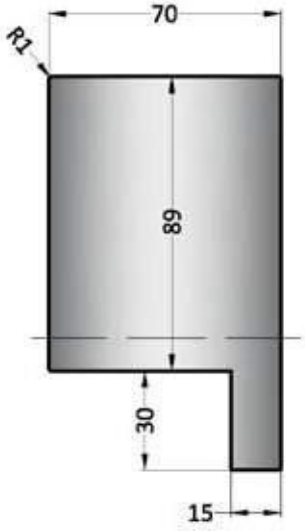

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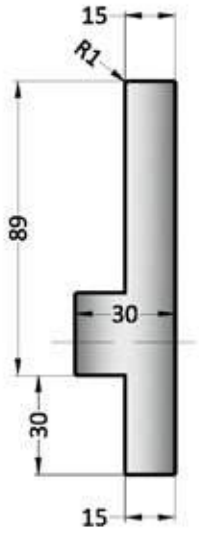

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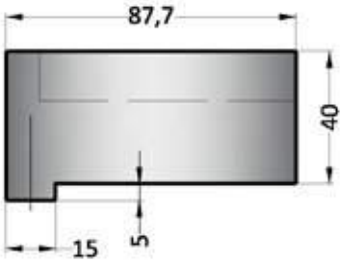

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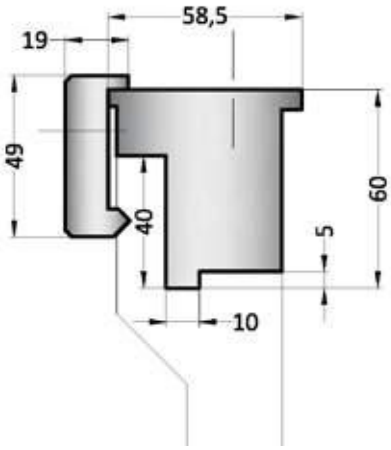

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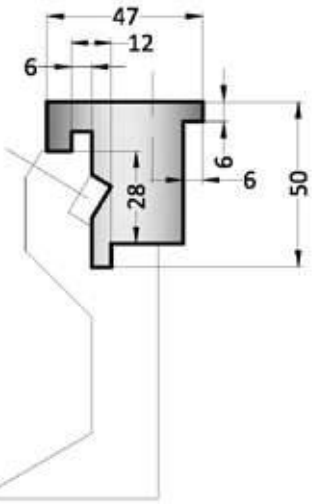

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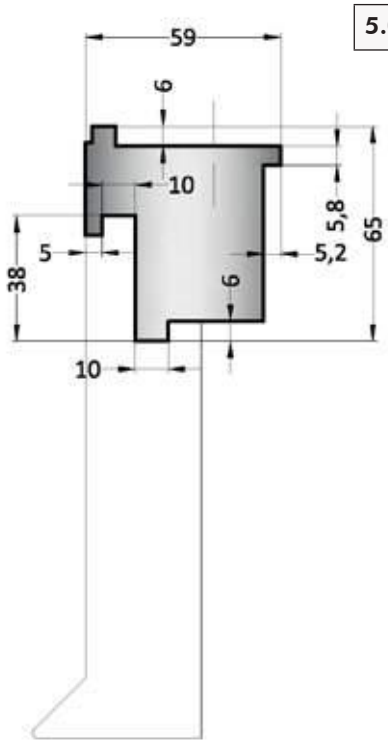
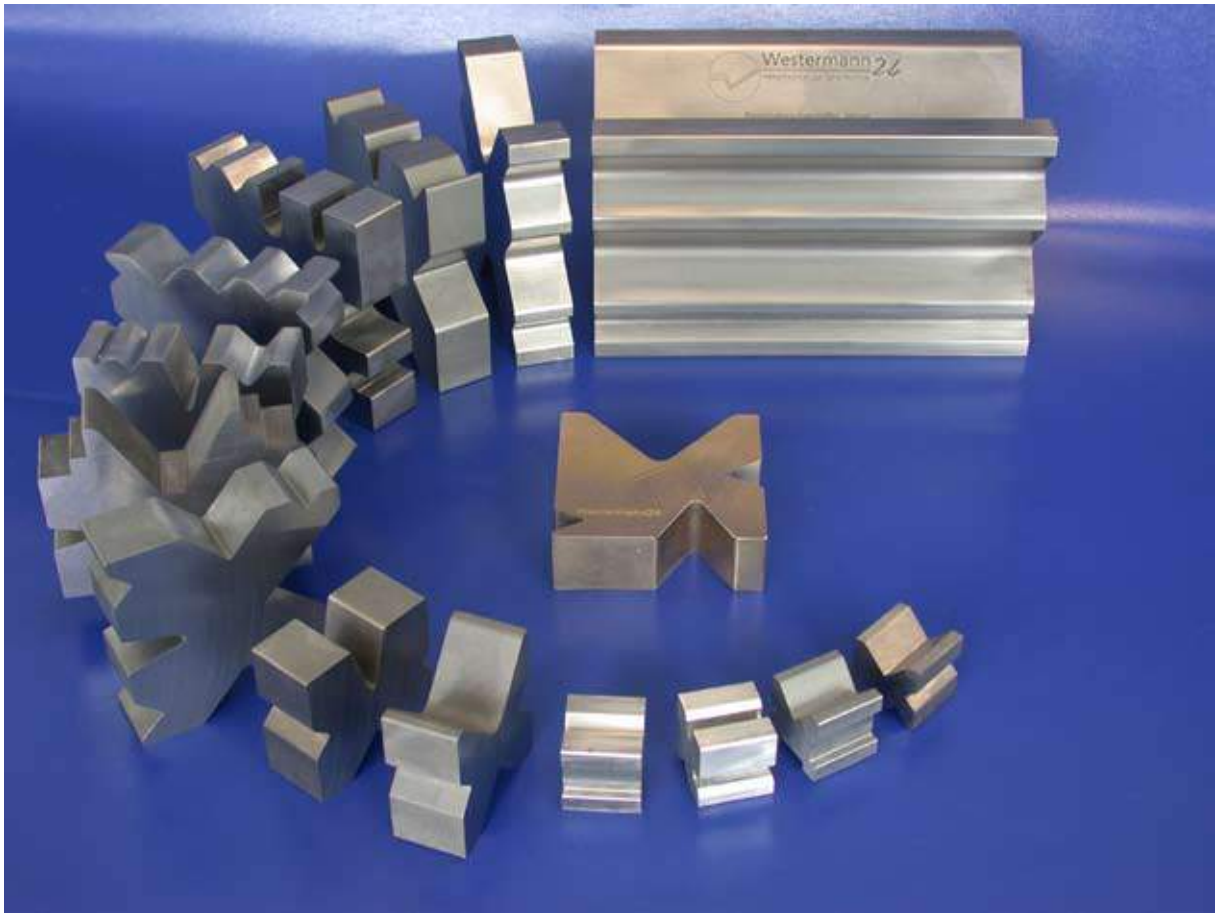


Black Line

Blockmatrizen

Block dies



Blockmatrizen in verschiedenen Ausführungen: gefräst, geschliffen, gehärtet. / Block dies in different designs: milled, grinded, hardened.

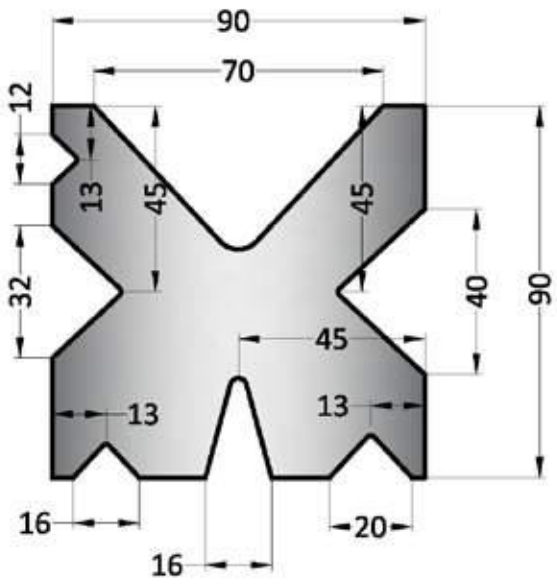
Vorteile:

- die einteilige Blockmatrize lässt sich durch stirnseitiges Anheben schnell drehen.
- Durch das Verschieben gegen den Anschlag , kann der Wechsel zu einer anderen V-Öffnung schnell vorgenommen werden.
- die einteilige Matrize hat keinen Stoß.
- die Anschaffungskosten im Vergleich zu 1- V- Matrizen sind meistens günstiger.

Advantages:

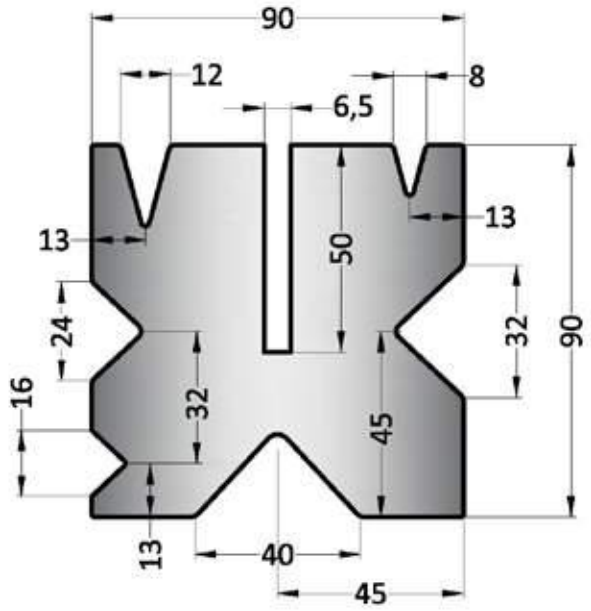
- with frontal lifting its possible to turn the one part block dies quickly.
- the change to a other V- opening is possible very quickly.
- the one-part dies has no impact barrier.
- the cost of purchase in cmparrison to 1- V- dies are more favourable.

2.05.009



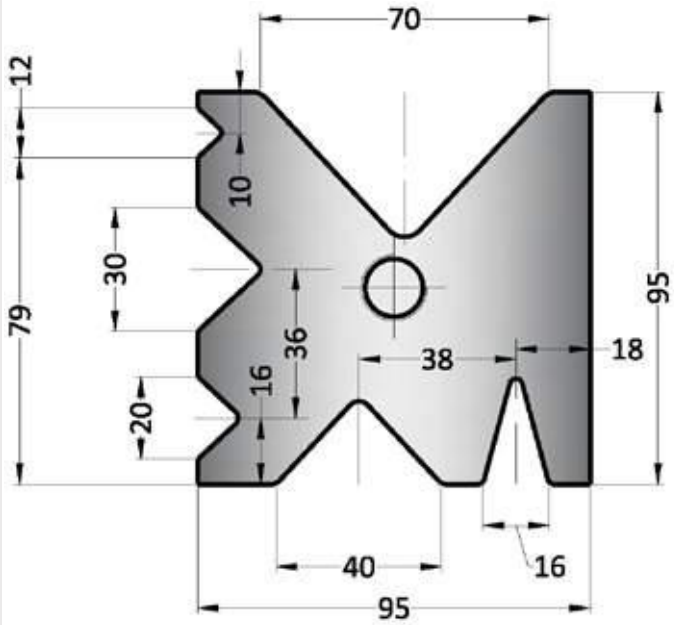
Nicht bemaßte Winkel = 30° / 86°

2.05.010



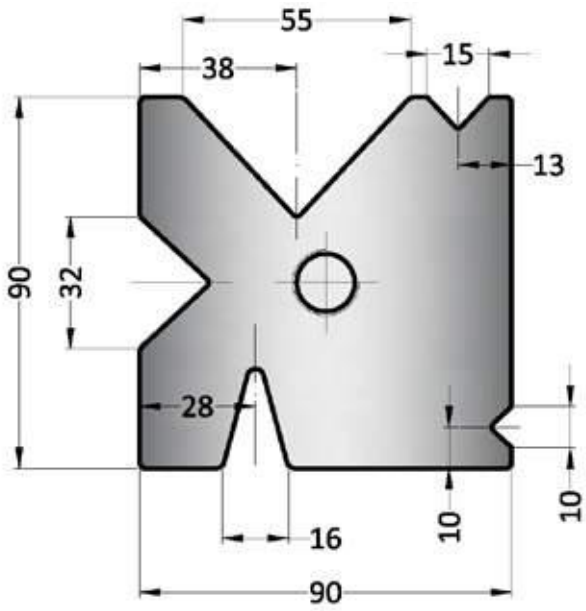
Nicht bemaßte Winkel = 30° / 86°

2.06.010



Nicht bemaßte Winkel = 30° / 86°

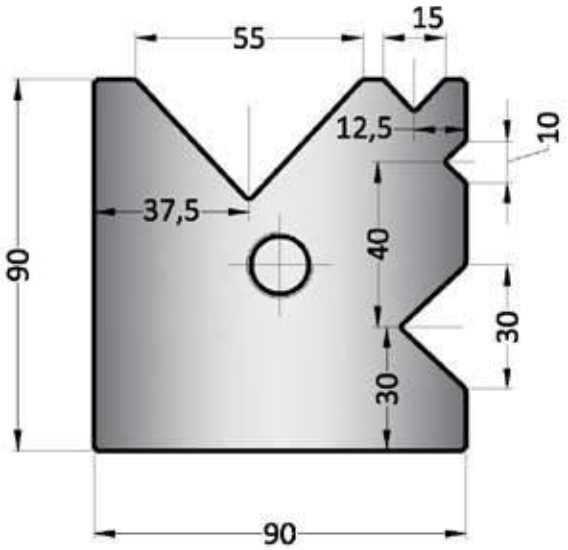
2.07.010



Nicht bemaßte Winkel = 30° / 86°

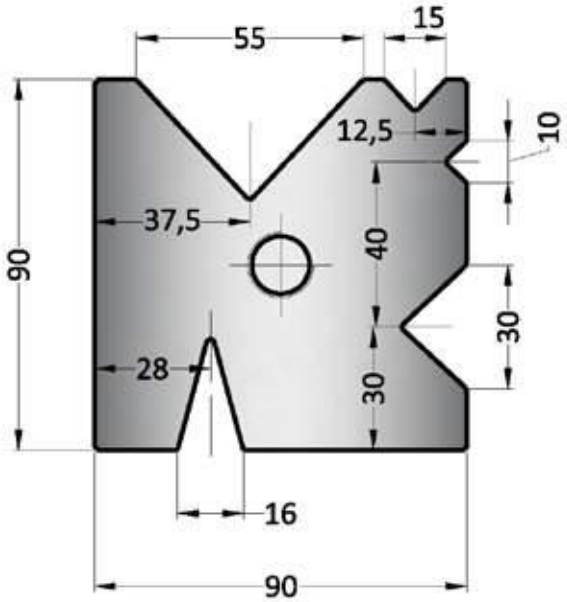
Black Line

2.09.190



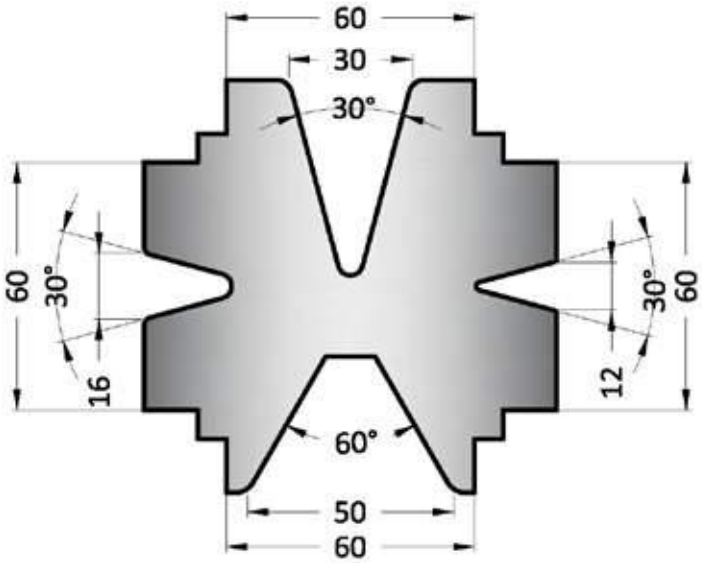
Nicht bemaßte Winkel = 86°

2.09.210



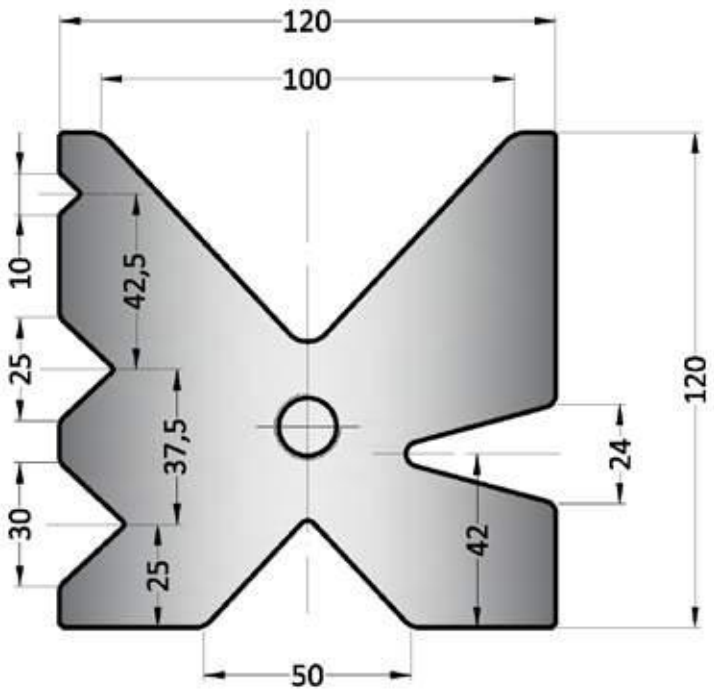
Nicht bemaßte Winkel = 30° / 86°

2.14.309



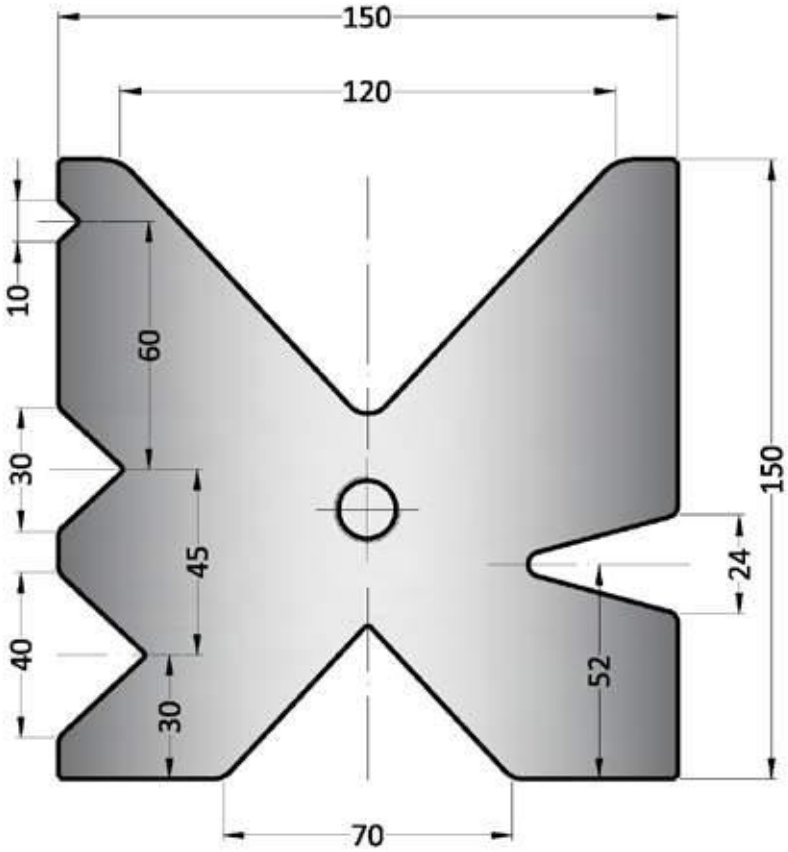
Black Line

2.18.010



Nicht bemaßte Winkel = 30° / 86°

2.18.011



Nicht bemaßte Winkel = 30° / 86°

Black Line

Verstellbare Öffnungsweite

Modell B= V24-124(125t/m)
Modell D=V60-V180(200t/m)
Modell E=V120-300(400t/m)

Adjustable opening width

Model B= V24-124(125t/m)
Model D=V60-V180(200t/m)
Model E=V120-300(400t/m)

Kleine Öffnungsweite / small opening width

Große Öffnungsweite: z.B. bis 300 mm / large opening width: for example till 300mm

Vorteile:

- Die Matrize deckt einen sehr breiten Gesenkweitenbereich ab Ständiger Matrizenwechsel ist daher nicht notwendig
- Abdruckarmes Biegen mittels sich mitdrehender Laufrollen
- Minimaler Verschleiß, durch gehärteten Laufrollen die sich mitdrehen
- Weniger Presskraft im Vergleich zu konventionellen Matrizen erforderlich
- Herstellung unterschiedliche Biegeradien am Produkt durch Verstellen der Gesenkweiten
- Verringerung der Stillstandszeiten um bis zu 30% durch schnelles und einfaches tauschen der Einstellleisten
- Minimale Wartungskosten:
- Die Laufrollen können getauscht werden, ein Nacharbeiten der kompletten Matrize ist nicht notwendig
- Austauschbaren Kunststoffstreifen schützen die Matrizenteile gegen Verunreinigungen durch Zunder oder andere Verschmutzungen
- Die VLM -Matrize bietet eine äußerst geringe Störkontur im Vergleich zu herkömmliche verstellbare Matrizen.

Advantages:

- The dies covers a very wide swage sizes range therefor a permanent change of the dies is not necessary
- Low impressioned welding with rotating support rolls
- Minimal wear because of hardened support rolls witch rotating too
- Fewer press force in comparison to conventionally dies necessary
- Producing of different bending radii at thr product because of recalibration of the swage size
- Reducing the down times till to 30% because of a quick and easy change from the profils of setting
- Minimal maintenance costs:
- The support rolls can be changed, a rework activity of the complete die is not necessary
- Changeable plastic strips protects the parts of the die against contamination
- The VLM –die offers extremly low cultur of malfunction in comparison to conventional adjustable dies.

	α	V	T/mt
65.125	max. 30°	25-125mm	125
empf. Materialstärke 3-15mm			

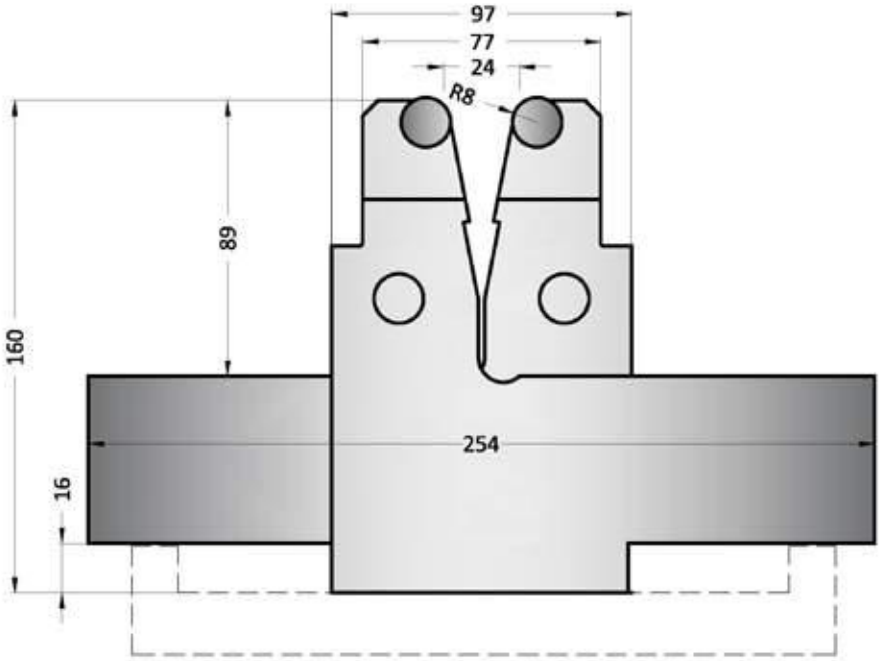
250 mm

500 mm

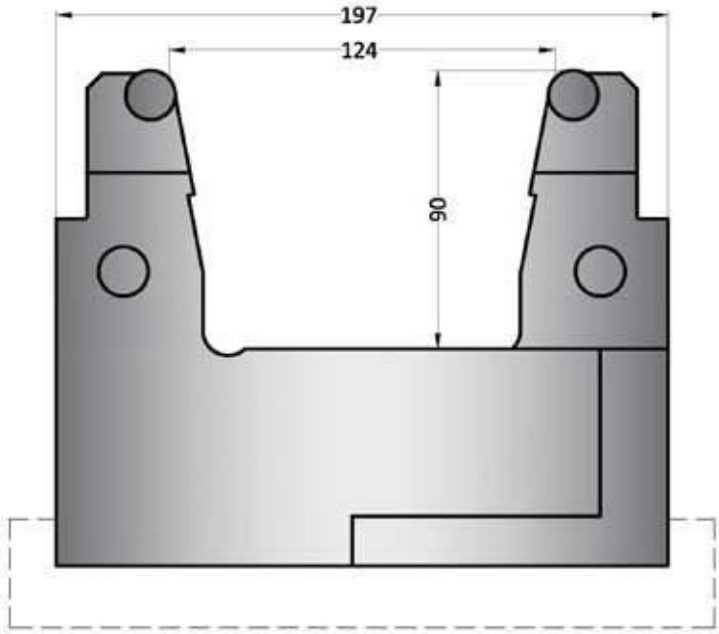
550 mm

1000 mm

1050 mm



geschlossen /
closed

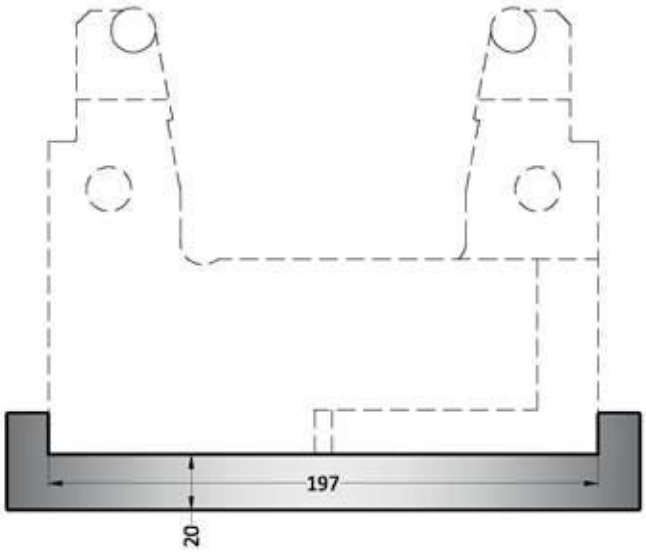


offen /
open

Black Line

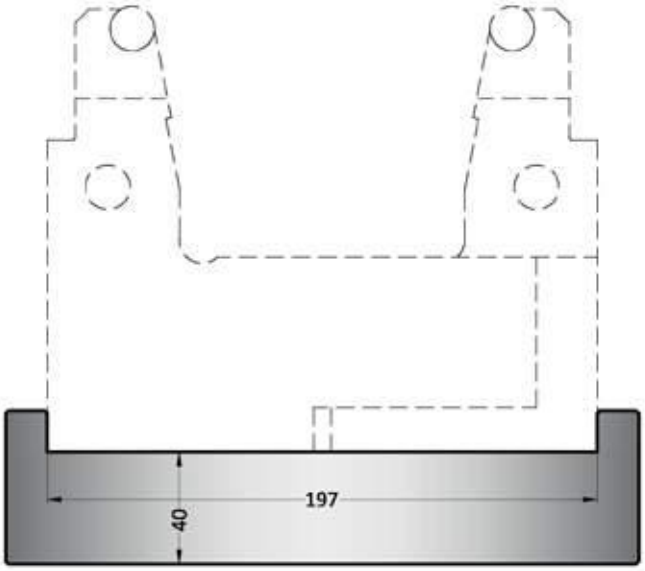
66.125 H=20

500 mm
1000 mm
2000 mm
3000 mm



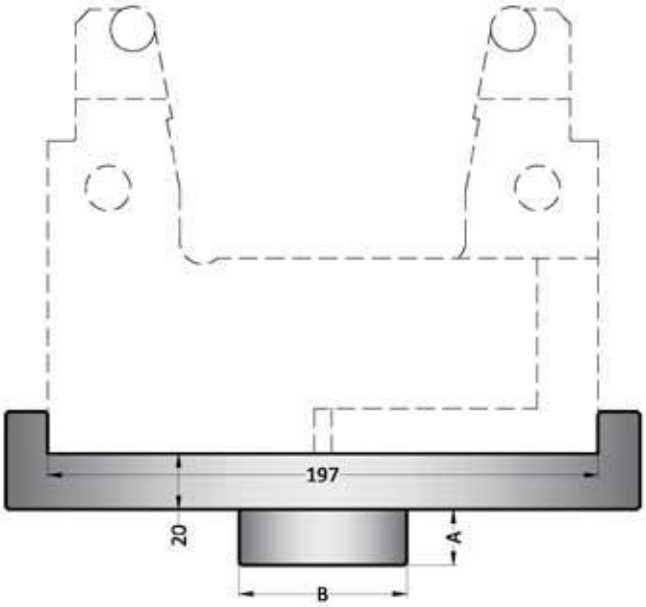
66.125 H=40

500 mm
1000 mm
2000 mm
3000 mm



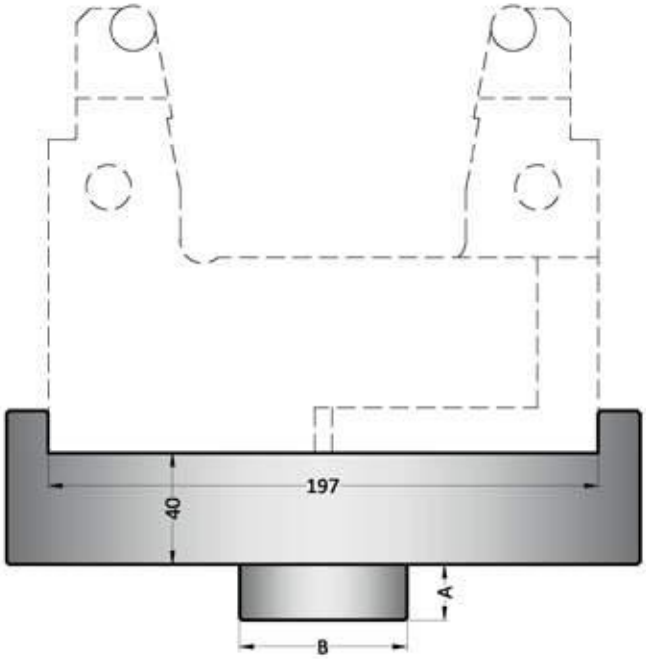
66.125 L (mit Keilleiste) H=20

500 mm
1000 mm
2000 mm
3000 mm



66.125 L (mit Keilleiste) H=40

500 mm
1000 mm
2000 mm
3000 mm



Black Line

	α	V	T/mt
65.185	max. 60°	65-185mm	200
empf. Materialstärke 6-20mm			

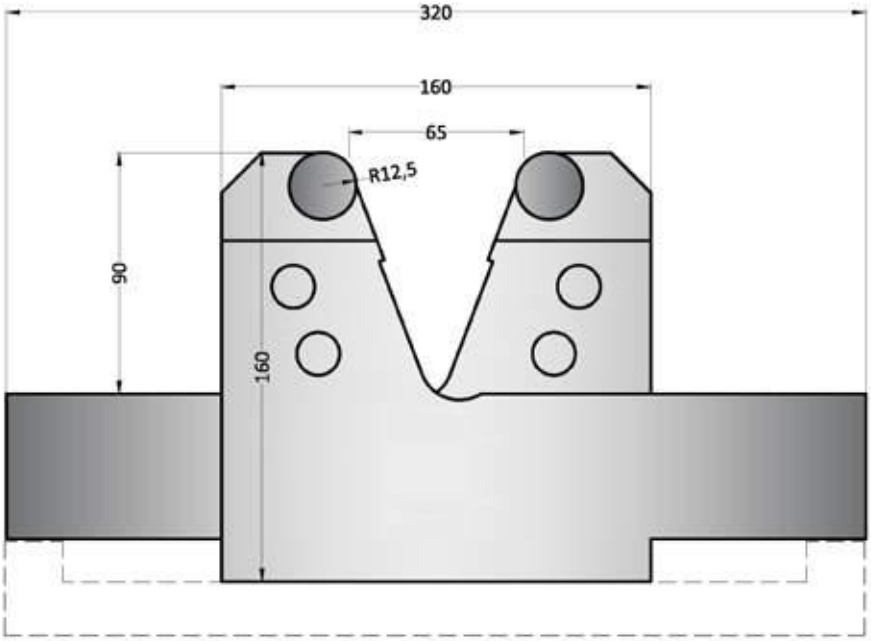
250 mm

500 mm

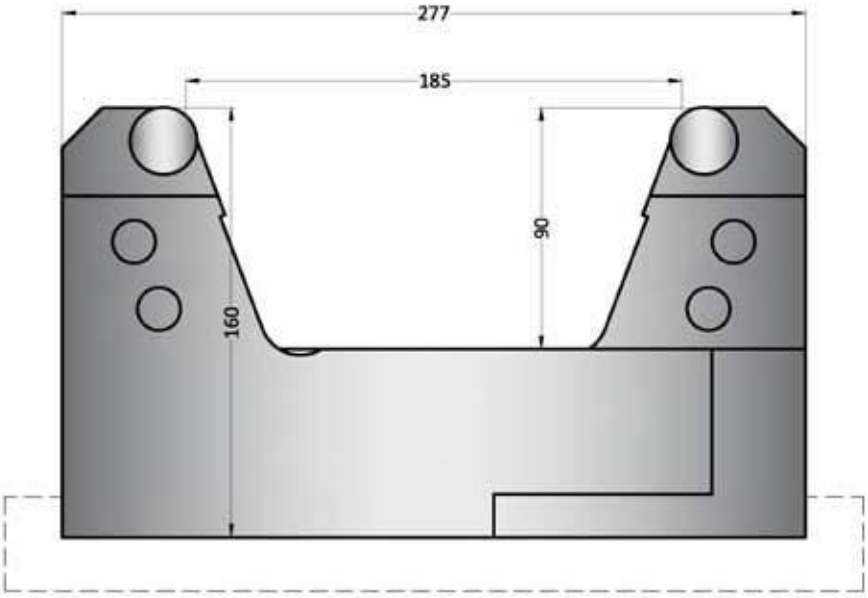
550 mm

1000 mm

1050 mm



geschlossen /
closed

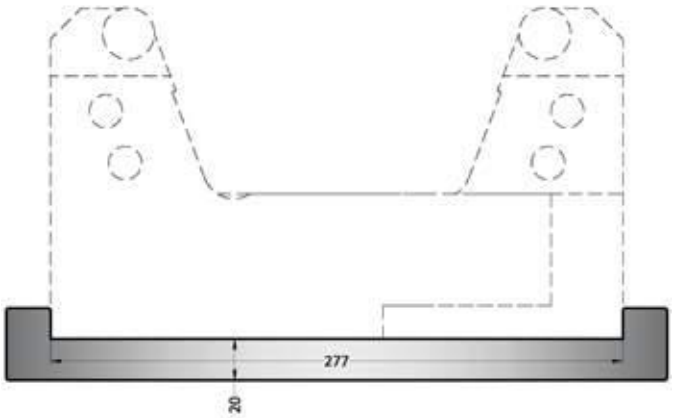


offen /
open

Black Line

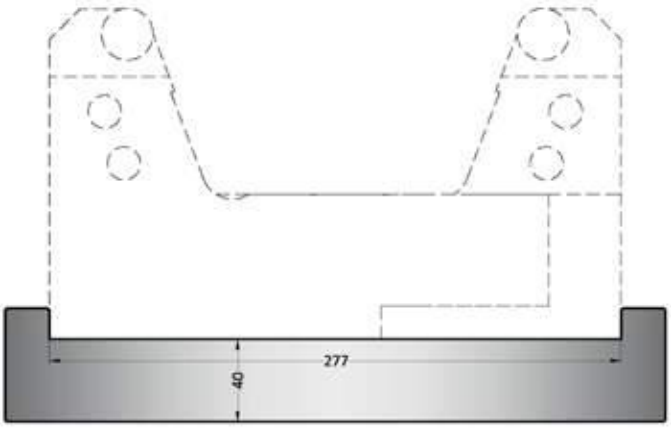
66.185 H=20

500 mm
1000 mm
2000 mm
3000 mm



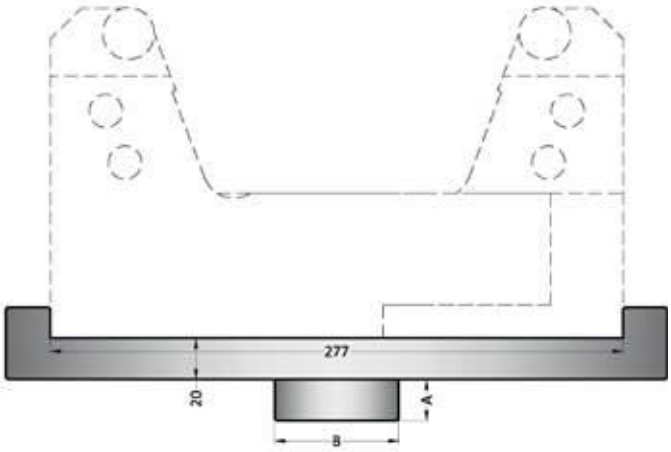
66.185 H=40

500 mm
1000 mm
2000 mm
3000 mm



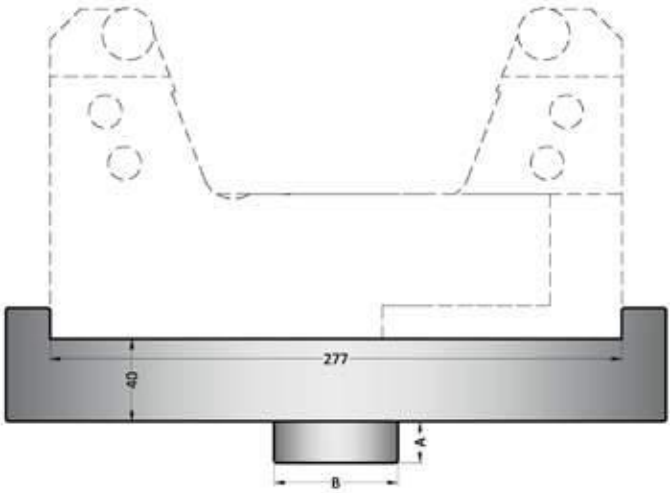
66.185 L (mit Keilleiste) H=20

500 mm
1000 mm
2000 mm
3000 mm



66.185 L (mit Keilleiste) H=40

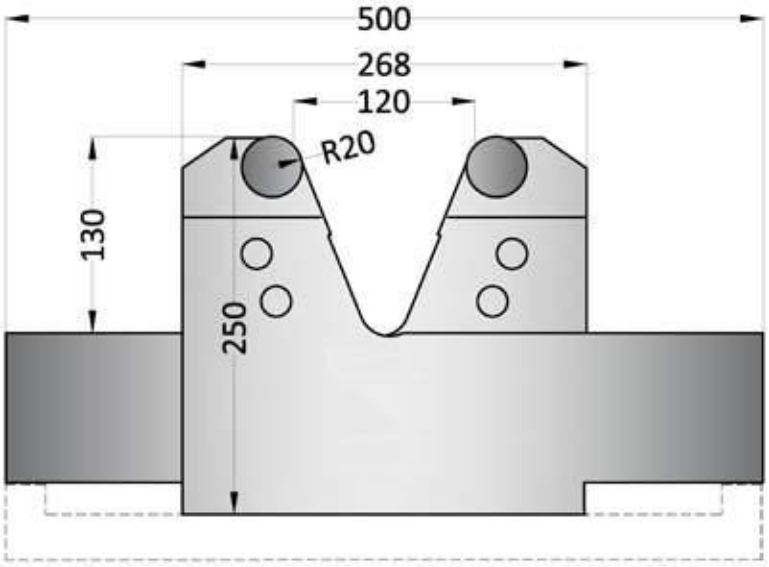
500 mm
1000 mm
2000 mm
3000 mm



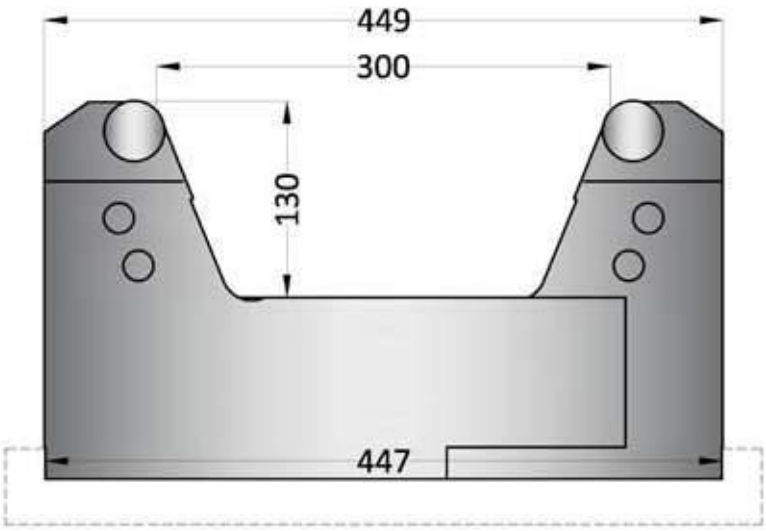
Black Line

	α	V	T/mt
65.300	max. 60°	120-300mm	400
empf. Materialstärke 8-30mm			

600 mm



geschlossen /
closed



offen /
open

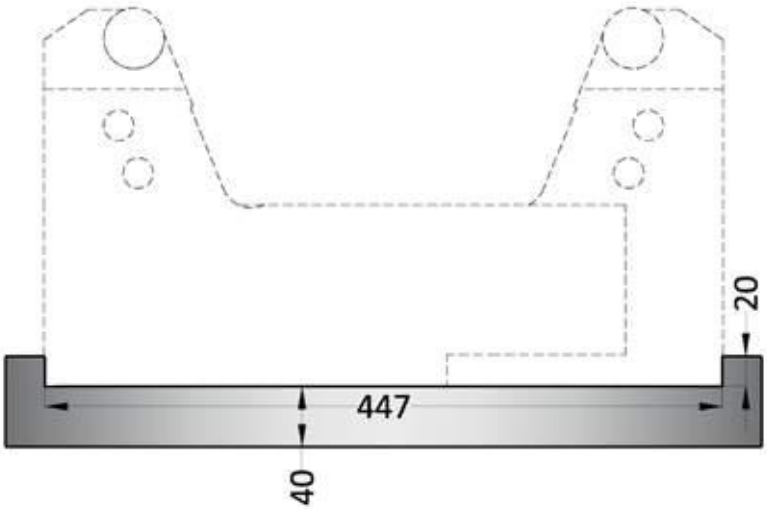
66.300

600 mm

1200 mm

2400 mm

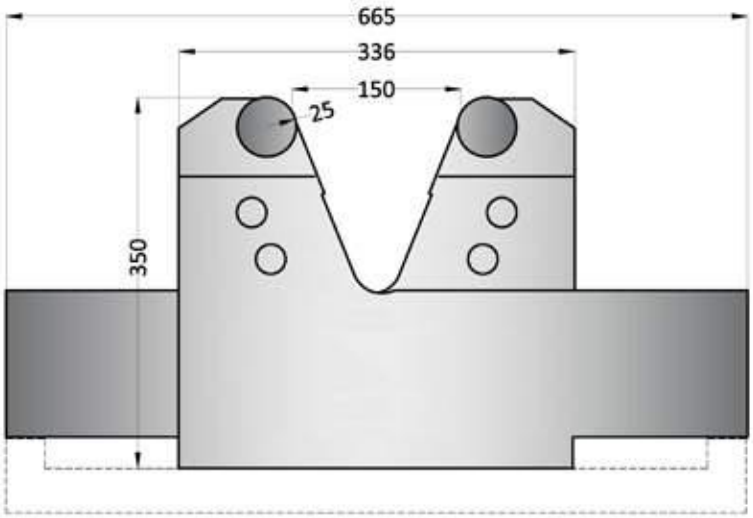
3000 mm



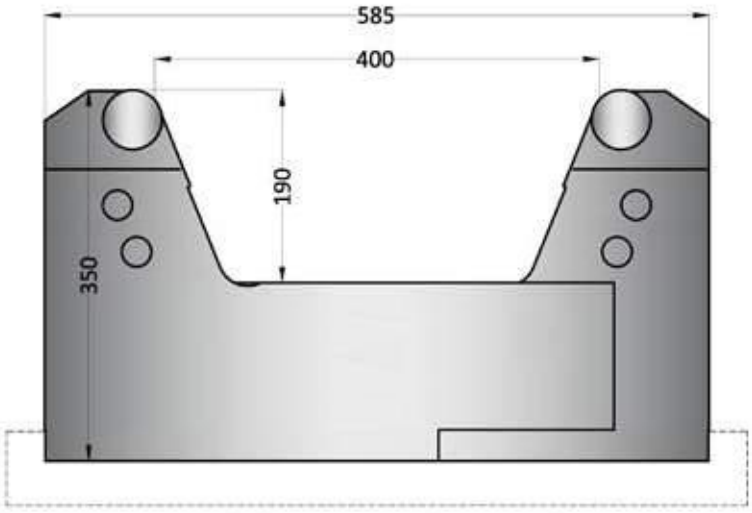
Black Line

	α	V	T/mt
65.400	max. 60°	150-400mm	600
empf. Materialstärke 10-50mm			

600 mm



geschlossen /
closed



offen /
open

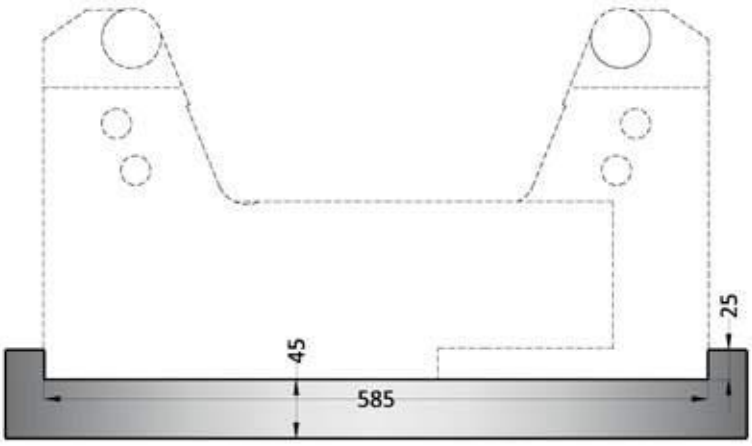
66.400

600 mm

1200 mm

2400 mm

3000 mm



Black Line

66.000 H=15

für Artikelnr. 65.125 und 65.185
Leisten im Set:
Breite = 2x je 2/5/10/15/20/30/40/50 mm

500 mm
1000 mm
2000 mm

66.000 H=20

für Artikelnr. 65.300
Leisten im Set:
Breite = 2x je 2/5/10/15/20/30/40/50/60 mm

600 mm
1200 mm
1800 mm

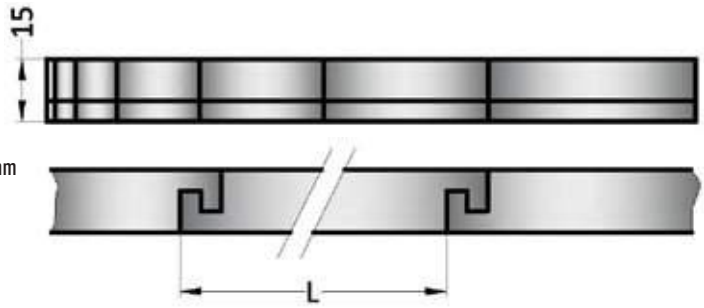
66.000 H=25

für Artikelnr. 65.400
Leisten im Set:
Breite = 2x je 2/5/10/15/20/30/40/50/60 mm

600 mm
1200 mm
1800 mm

66.001 H=15

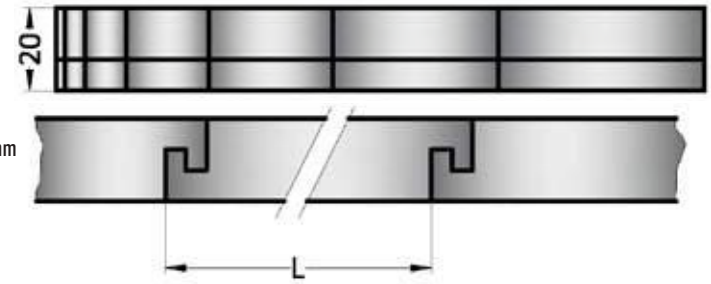
für Artikelnr. 65.125 und 65.185
Leisten im Set:
Breite = 2x je 2/5/10/15/20/30/40/50 mm



510 mm
1010 mm
2010 mm

66.001 H=20

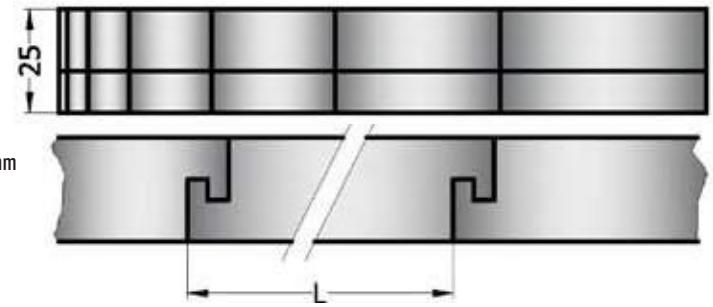
für Artikelnr. 65.300
Leisten im Set:
Breite = 2x je 2/5/10/15/20/30/40/50/60 mm



610 mm
1210 mm
1810 mm

66.001 H=25

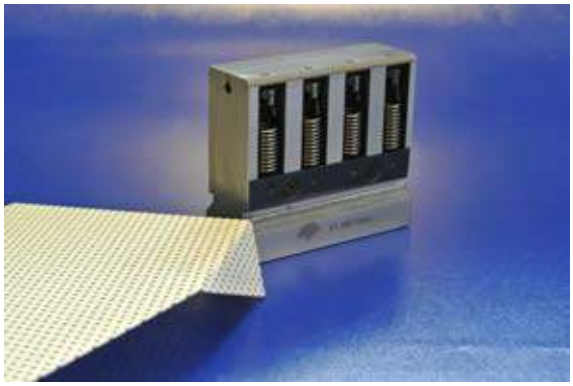
für Artikelnr. 65.400
Leisten im Set:
Breite = 2x je 2/5/10/15/20/30/40/50/60 mm



610 mm
1210 mm
1810 mm

Black Line

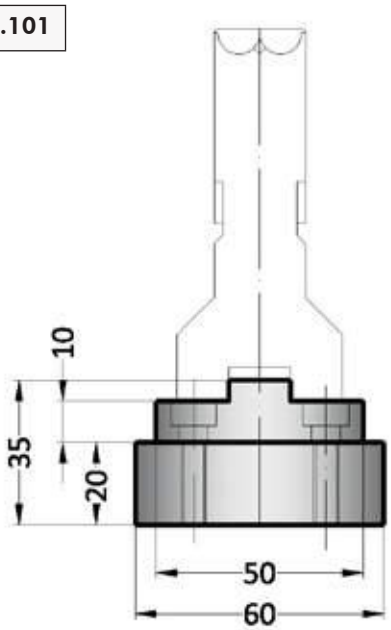
Flexo



60.101

415 mm

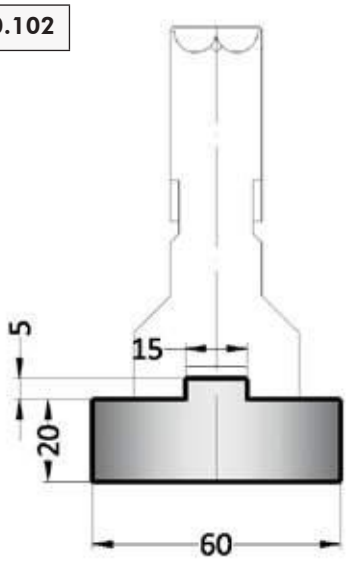
835 mm



60.102

500 mm

1000 mm



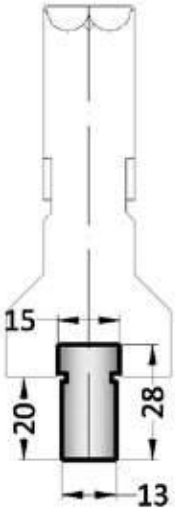
60.103

50 mm

90 mm

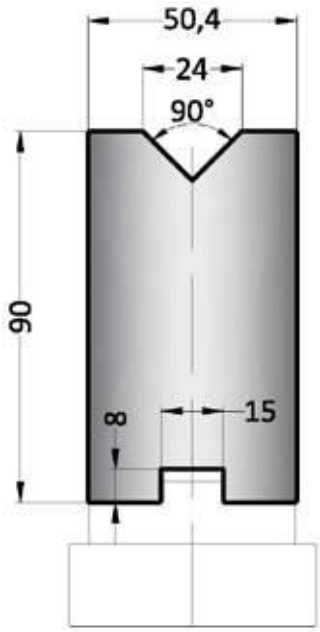
100 mm

200 mm



60.104

40,4 mm

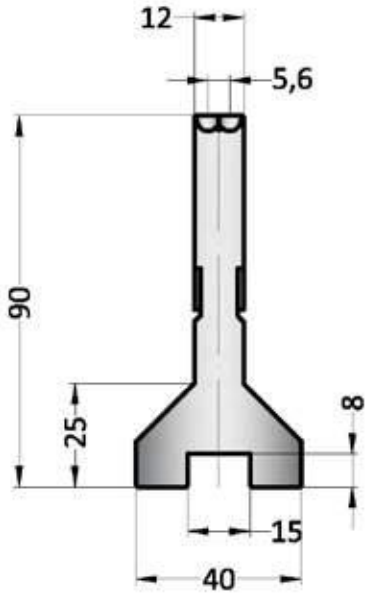


Justierstück zur exakten Ausrichtung der Aufnahme 60.101 /
adjustment piece for exact alignment of the inclusion 60.101

Black Line

61.120

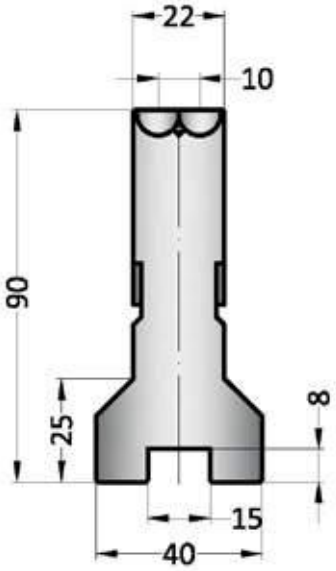
50 mm
90 mm
100 mm
200 mm



für t = 0,2-1,2 mm

61.230

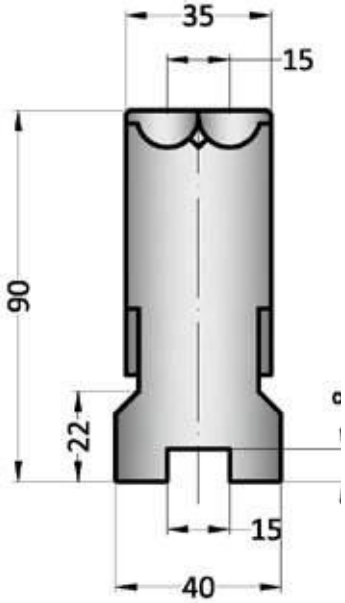
50 mm
90 mm
100 mm
200 mm



empfohlen: t = 1,0-2,3 mm

61.350

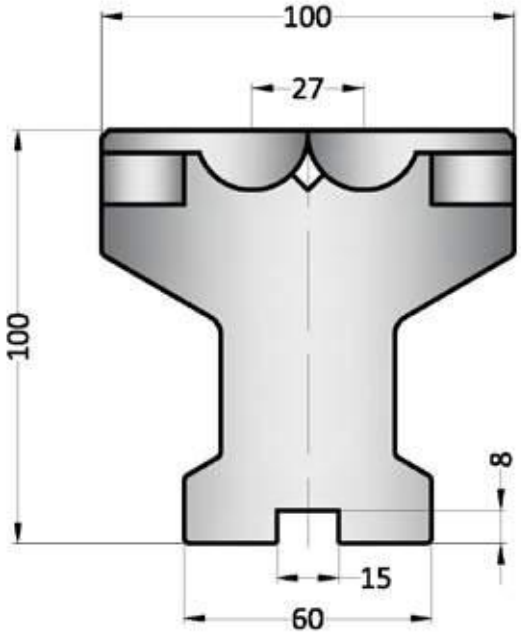
50 mm
100 mm
200 mm



empfohlen: t = 2,0-3,5 mm

61.650

50 mm
100 mm
200 mm

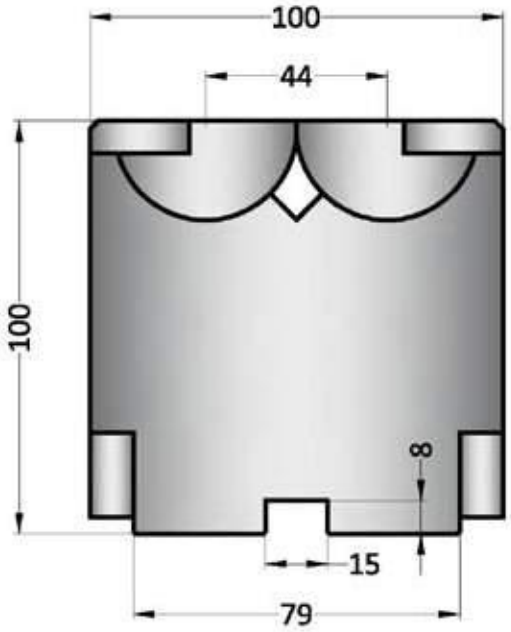


empfohlen: t = 3,0-6,5 mm

Black Line

61.950

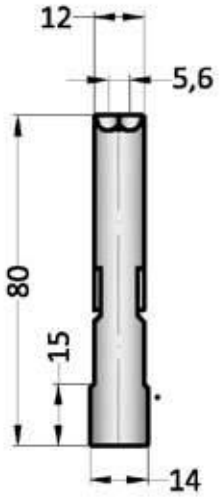
50 mm
100 mm
200 mm



empfohlen: t = 4,0-9,5 mm

64.120

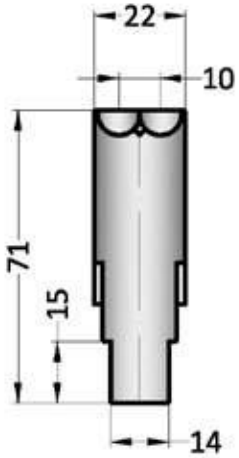
50 mm
90 mm
100 mm
200 mm



für t = 0,2-1,2 mm

64.230

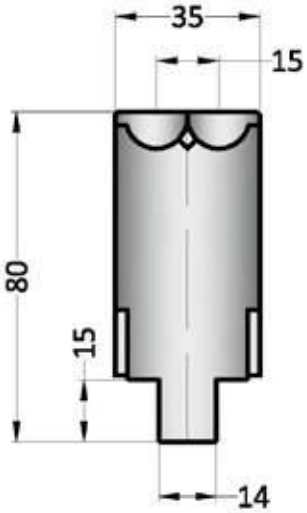
50 mm
90 mm
100 mm
200 mm



empfohlen: t = 1,0-2,3 mm

64.350

50 mm
100 mm
200 mm



empfohlen: t = 2,0-3,5 mm

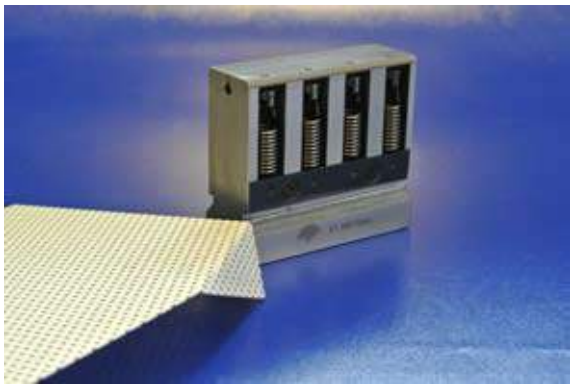
Black Line

Richtwerte für Mindestschenkellängen: Stahl

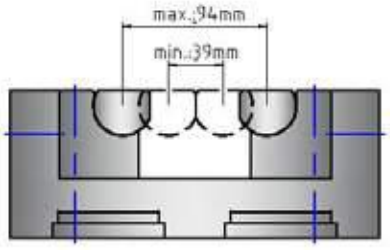
Typ	Stempel	Blechdicke												
		0,5	0,8	1,0	1,5	2,0	2,5	3,0	4,0	5,0	6,0	7,5	9,5	10,0
61.120	R 0,5	2,7	3,2	3,5										
64.120	R 1,0	2,9	3,4	3,6										
61.230	R 0,5		4,9	5,5	6,0	5,8								
64.230	R 1,0		4,7	5,4	6,1	6,6								
61.350 64.350	R 1,0		5,6	7,1	8,1	8,3	8,9	9,4						
61.500	R 1,0			6,7	8,2	10,4	11,7	13,3	15,1	16,3				
	R 4,0			7,2	9,2	10,9	12,3	13,9	15,8	16,1				
61.950	R 1,0								24,0	29,0	30,0	32,0	33,5	35,0
	R 5,0					26,0	26,0	26,0	30,0	31,0	32,0	35,0	36,0	38,0
	R 10,0	23,0	23,0	23,0	24,0	24,0	25,0	27,0	28,0	31,0	32,0	34,0	38,0	

Richtwerte für Mindestschenkellängen: Edelstahl

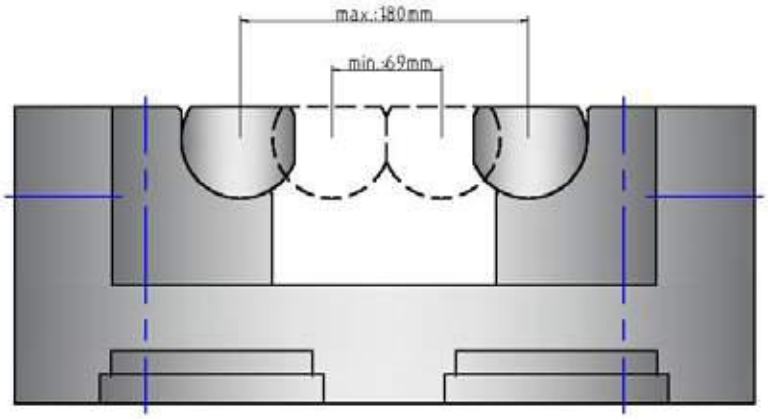
Typ	Stempel	Blechdicke												
		0,5	0,8	1,0	1,5	2,0	2,5	3,0	4,0	5,0	6,0	7,5	9,5	10,0
61.120	R 0,5	2,8	3,4	3,7										
64.120	R 1,0	3,0	3,5	3,8										
61.230	R 0,5		5,3	5,7	6,0	6,6								
64.230	R 1,0		5,3	5,7	6,1	6,4								
61.350 64.350	R 1,0		6,6	7,4	8,6	8,7	9,0	9,4						
61.500	R 1,0			7,6	9,9	11,9	12,9	14,1	15,2					
	R 4,0			8,1	10,6	12,0	13,0	13,8	15,3					
61.950	R 1,0								24,2	29,3	30,4	32,5	34,0	36,0
	R 5,0					26,2	26,2	26,2	30,4	31,5	32,7	35,8	37,0	39,0
	R 10,0	23,1	23,1	23,1	24,2	24,3	25,4	27,7	28,9	32,0	33,2	35,5	39,5	



VARIO



62.094
1000mm
500mm
200mm



62.180
1000mm
500mm
200mm

62.281
500mm
200mm

konkav Profil für 62094

62.282
500mm
200mm

V-Profil für 62094

62.283
500mm
200mm

flach Profil für 62094

62.181
500mm
200mm

konkav für 62180

62.282
500mm
200mm

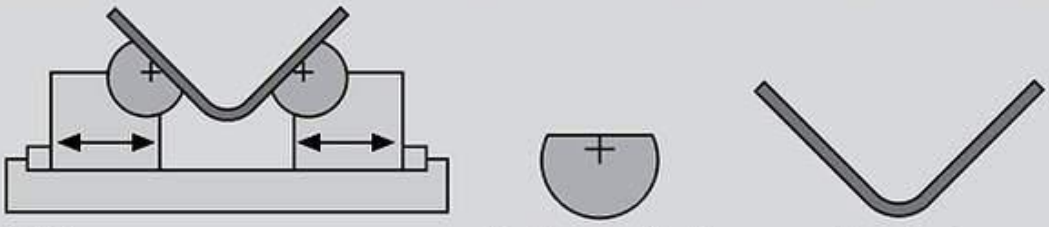
V-Profil für 62180

62.283
500mm
200mm

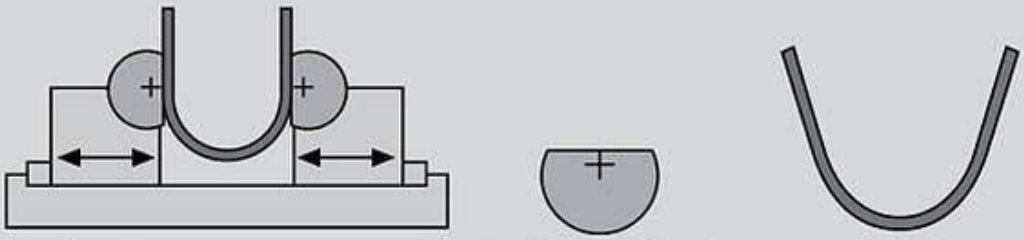
flach-Profil für 62180

Black Line

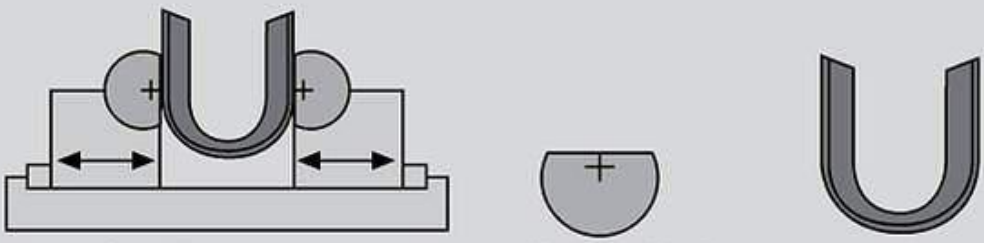
Anwendungsbeispiele



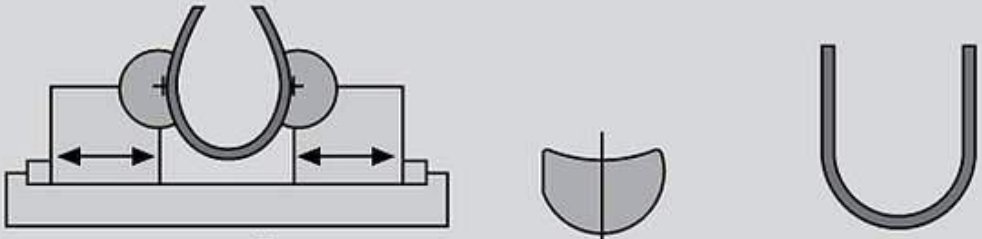
V-Biegen | Rollentyp flach | Ergebnis



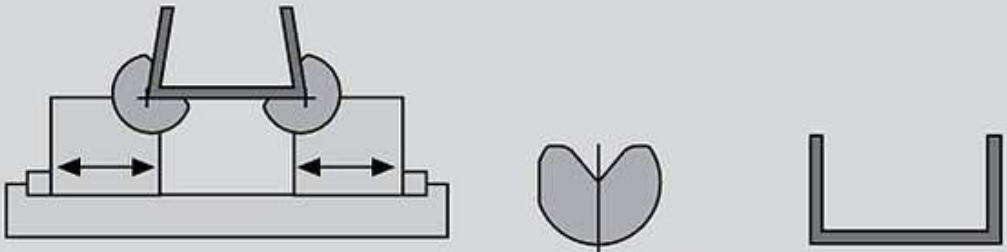
Radius-Biegen | Rollentyp flach | Ergebnis



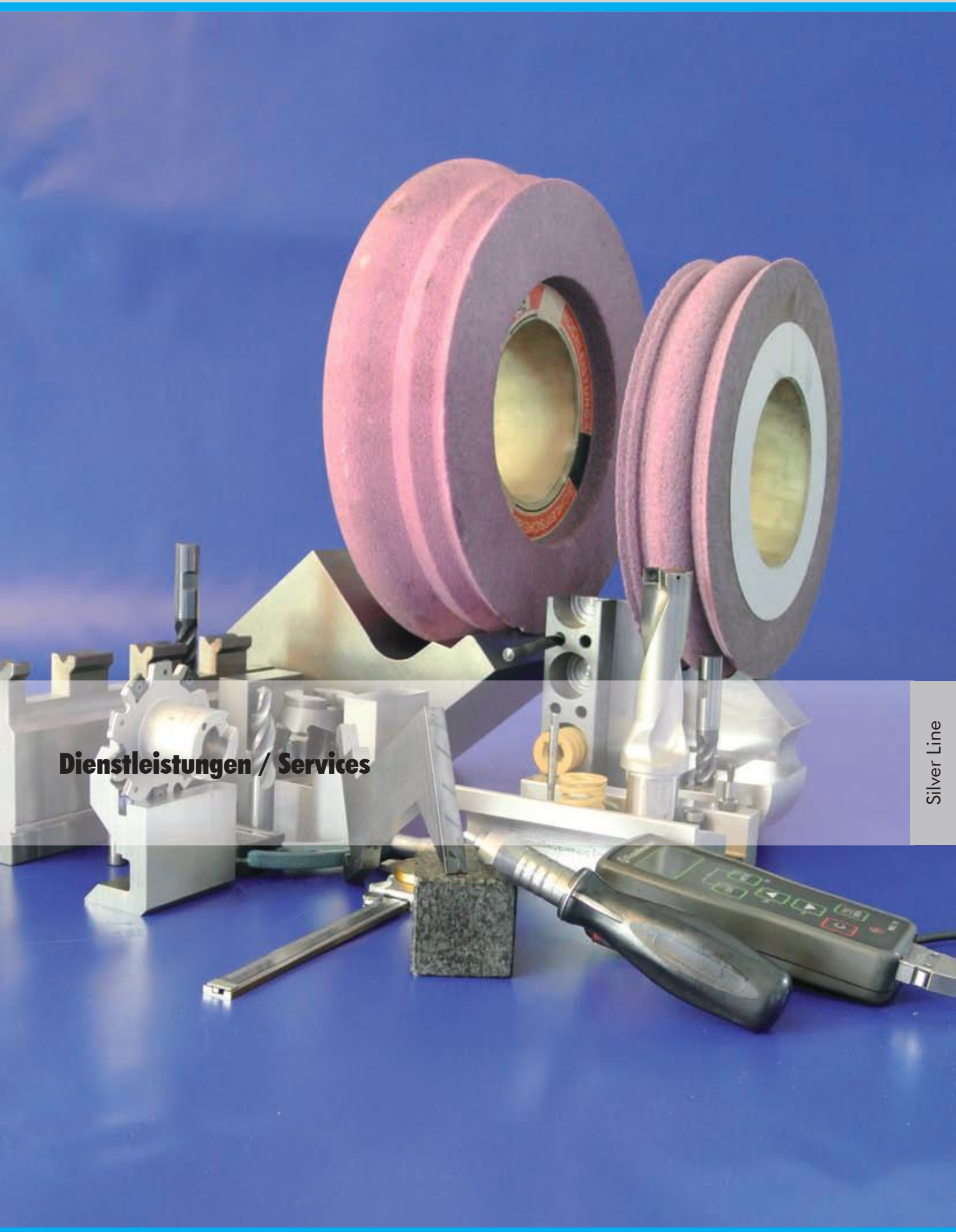
Konisches Formen | Rollentyp flach | Ergebnis



Radius-Biegen/Überbiegen | Rollentyp konkav | Ergebnis



U-Biegen | Rollentyp V | Ergebnis



Dienstleistungen / Services

Laserhärten

Laserhärten bis 100mm Breit / Laser-hardening till 100mm widet

Westermann24 härtet Neuwerkzeuge und Ihre gebrauchten Werkzeuge mit einer sehr Leistungsstarken Laserhärtanlage.

Vorteile:

- eine wesentliche Standzeitverlängerung wird erzielt.
- zu erreichende Härte bis zu 60 HRC
- Einhärtetiefen bis zu 8mm
- breite „Härtespuren" bis zu b=100mm (z.B. Zudrückfläche/Schwenkbie-gewerkzeug)
- prozesssicherer Härtevorgang (Zertifiziert nach DIN EN ISO 9001)

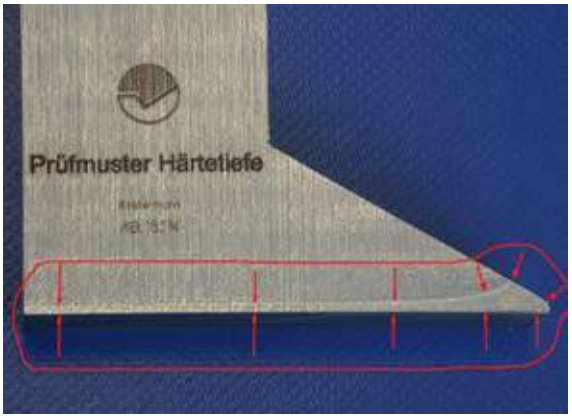
Laser hardening

vorher, nachher, Trennschnitt / Einhärtetiefe / before, after, complete separation cut / hardening depth

Westermann24 is hardening new and your used tools with a powerful hardening system.

Advantages:

- a significantly endurance extension is reached.
- hardening to reach till 60 HRC
- depth of hardening till 8mm
- wide hardening tracks till b=100mm (f.e. pressing shut area/ folding tool)
- process safe hardening process (certified to DIN EN ISO 9001)



Im Sägequerschnitt ist die Einhärtetiefe am Prüfmuster (wie hier im Bild) gut zu erkennen. / in the sawing cross section is the depth of hardening at the sample (as the picture) easy to recognize.

Nach Terminabsprache schleifen und härten wir Ihre gebrauchten Werkzeuge innerhalb von 1 Arbeitstag

Silver Line

Nachschleifen und härten Ihrer Abkantwerkzeuge

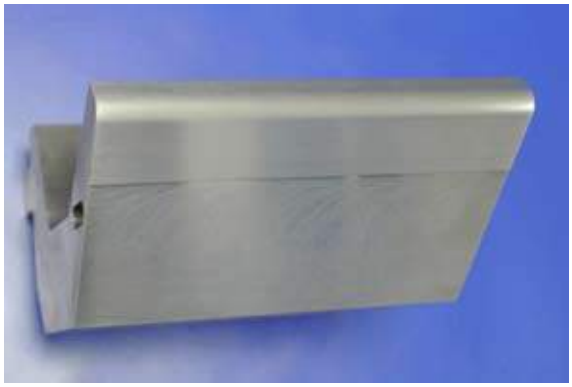
Lieferzeit:
nach Terminabsprache 1 Arbeitstag

Regrinding and hardening of your press brake tools

delivery period:
after prior agreement regarding the date 1 workday

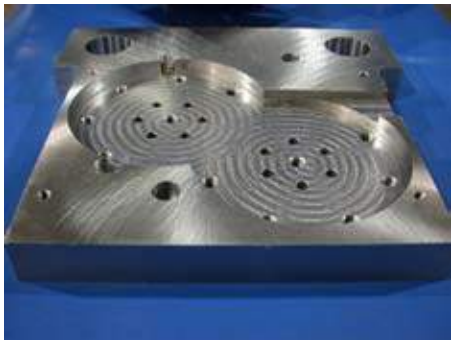
hohe Wiederholgenauigkeit durch **CNC-Profilschleifen** / high repetition exactness by **CNC-grinding of the profile**

Vorher / before

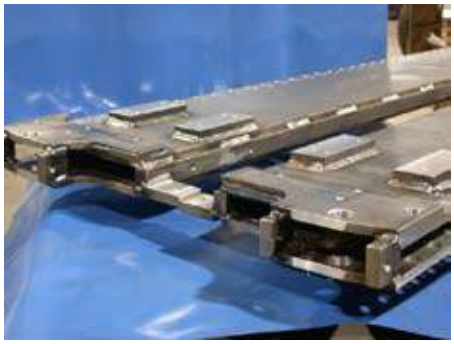


Nachher / after

CNC-Fräsen bis 5000mm

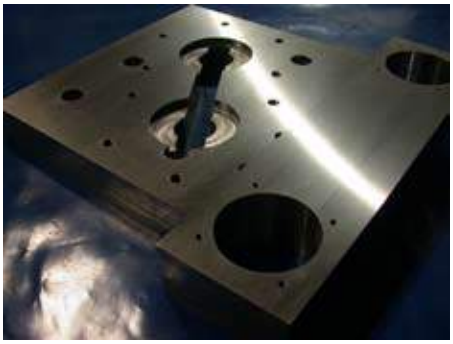


Säulengestell / column frame



Maschinenkörper / machine frame

CNC-grinding till to 5000mm

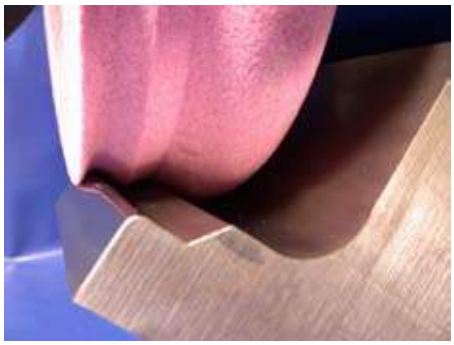


Grundplatte / baseplate

Kurvenscheibe/Flachschleifen/Fräsen / cam plate/straight wheels/milling

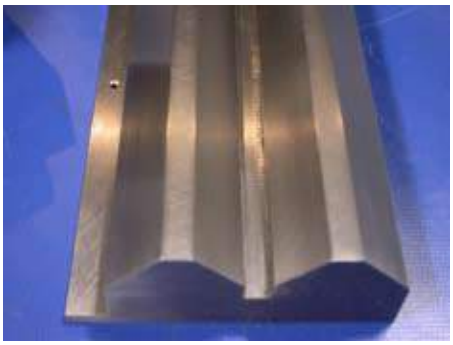
Flach und Profil – Schleifen bis 6500mm

Führungsbahnen / guiding paths

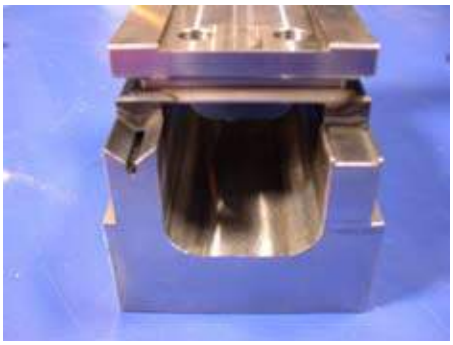


Profilschleifen / profile milling

Flat sheet and profile – grinding till to 6500mm



Dachführung / roof maintenance



Flach – Dachführung / flat – roof maintenance

Haben Sie jetzt Zeit für Ihre Abkantpresse?

ausgebaute Oberwange / assembled upper beam

Problem:
Eine abgenutzte Werkzeugaufnahme ist Ursache für schlechte Qualität Ihrer Kantprodukte.

Unsere Lösung:
Westermann24 erneuert die Werkzeugaufnahme mittels Nacharbeit oder den Einsatz von Verschleißleisten, die bei wiederkehrendem Verschleiß nur ausgewechselt werden müssen.

Lieferzeit: 1-2 Werktage nach Terminabsprache

eingesetzte Verschleißleisten / used exchangeable wearbars

Do you have time for your press brake?

nachsetzen der Aufnahme / repositioning of the holder

Problem:
The cause of bad quality of your press brake products is a a worn toolholder.

Our solution:
Westermann24 renewes the toolholder by reworking or the useing of exchangeable wearbars.

delivery period: 1-2 workdays after fixing an appointment

nachgeschliffene Spannelemente / regrounded clamping elements

Reibungsarme Beschichtungen

Verbessern Sie die Qualität Ihrer Produkte durch beschichtete Werkzeuge.

Das Problem:
- Kaltaufschweißungen am Werkzeug durch Alu-und verzinktem Stahlblech
- Edelstahl – Kantteile die von Hand aufwendig nachpoliert werden müssen . (ferritische Abriebe)
- Riefen und Kratzer auf dem Blech
- Werkzeugverschleiß, Werkzeugpflege

Kaltaufschweißung durch Abrieb

Unsere Lösung:
Westermann24 bietet hier eine metallbasierende Beschichtung, die nur wenige tausendstel Millimeter dünn, aber härter als Stahl, extrem reibungsarm, verschleißfest, und chemisch inert ist. Diese Beschichtung erfolgt als letzter Fertigungsschritt.

Vorteile:
- Niedrigere Gleitreibungszahl 0,1-0,15μ/G
- Standzeitverlängerung zu gehärtet geschliffenen Werkzeugen (keine Kaltaufschweißungen)
- Hohe Abriebsfestigkeit bis zu einer Mikrohärte von3000 HV Vickers (zum Vergleich: Ein einsatzgehärtetes Werkzeug hat 60 HRC / Rockwell = 715 HV / Vickers)

Low friction coatings

Coated tools optimize the quality of your products.

The Problem:
- cold bondings at the tool because of aluminium and zink plated steel sheets
- foldingparts of stainless-steel which have to be hand polished. (ferrite abrasion)
- Scratches and Grooves at the sheet metal
- wearing of tools, calibrating tools

Our solution:
Westermann24 provides at this point a metal- based coating, only a few nanometers thick, but harder than steel, extremely low friction, wear resistant, and chemical inert. This coating is the last step of production.

Advantages:
- low number of sliding friction 0,1-0,15μ/G
- extended lifetime to ground and hardened tools (no cold boundings)
- high abrasion resistance up to mikrohardness of 3000 HV Vickers (comparison: A case hardened tool has 60 HRC / Rockwell = 715 HV / Vickers)

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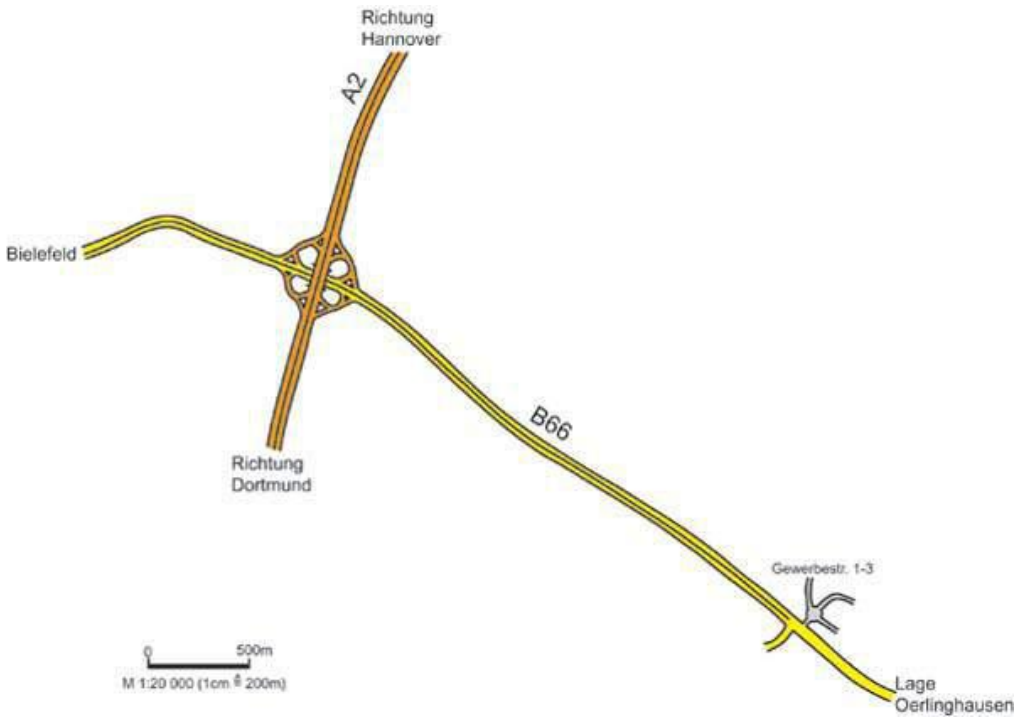

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