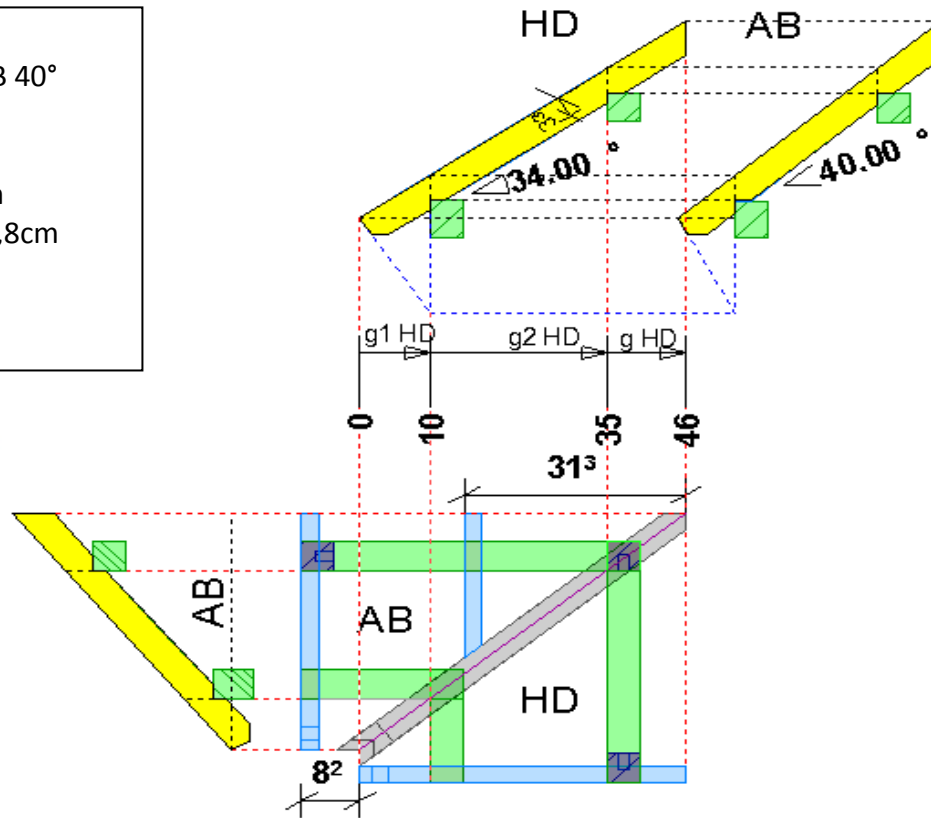
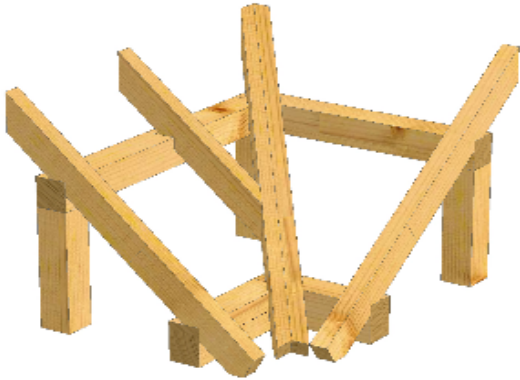


Modell 02 - Basis

Kehlsparren ungleiche DN, HD 34°, AB 40°
Dachvorsprung ungleich
MB und PF gleich hoch
wOh HD 3,3cm, sOh HD und AB gleich
Sparren 2,5/4,5cm, Kehlsparren 4,0/5,8cm
MB 4,5/5,8cm, PF 4,5/4,5cm
Abschnitt Sparren HD rechtwinkelig



Angaben zur Konstruktion:

Hauptdach:

g1 HD = 10,00 cm
g2 HD = 35,00 cm
g HD = 46,00 cm
DN HD = 34,00 °
wi Oh = 3,30 cm
As. Sp. = 90,00 °

Anbau:

DN Ab = 40,00 °
gleiches sOh
gleiche Mb/Pf OK
Traufabschnitt angepasst

Holzdimensionen:

Mauerbank 4,50 / 5,80
Pfette 4,50 / 4,50
Säule 4,50 / 4,50
Sparren 2,50 / 4,50
Gratsparren 4,00 / 5,80

Traufenlänge Ab = 8,20 cm

Fixmaß Sch 1 Ab = 31,30 cm

Hauptdachprofil:

$$g1 \text{ HD} = 10,00 \text{ cm}$$

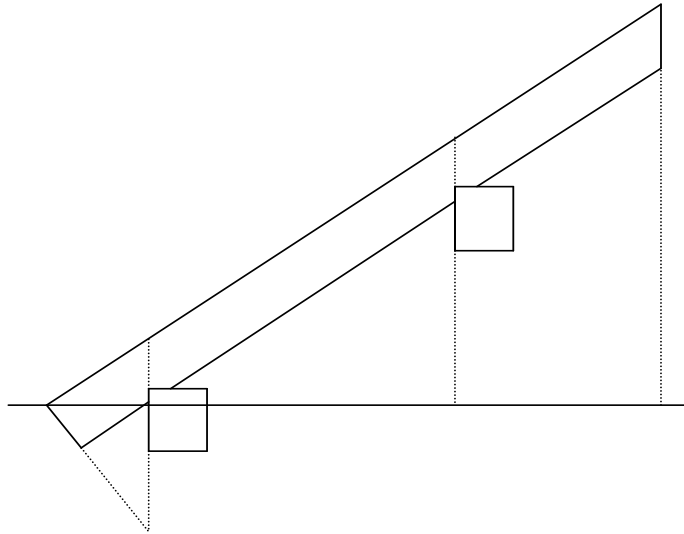
$$g2 \text{ HD} = 35,00 \text{ cm}$$

$$g \text{ HD} = 46,00 \text{ cm}$$

$$\text{DN HD} = 34,00^\circ$$

$$wi \text{ Oh} = 3,30 \text{ cm}$$

$$Aw \text{ Sp.} = 90,00^\circ$$



$$g1 \text{ HD} = 10,00 \text{ cm}$$

$$g2 \text{ HD} = 35,00 \text{ cm}$$

$$g \text{ HD} = 46,00 \text{ cm}$$

$$s1 \text{ HD} = 10,00 : \cos 34,00 = \underline{\underline{12,062 \text{ cm}}}$$

$$s2 \text{ HD} = 35,00 : \cos 34,00 = \underline{\underline{42,218 \text{ cm}}}$$

$$s \text{ HD} = 46,00 : \cos 34,00 = \underline{\underline{55,486 \text{ cm}}}$$

$$h1 \text{ HD} = 10,00 \times \tan 34,00 = \underline{\underline{6,745 \text{ cm}}}$$

$$h2 \text{ HD} = 35,00 \times \tan 34,00 = \underline{\underline{23,608 \text{ cm}}}$$

$$h \text{ HD} = 46,00 \times \tan 34,00 = \underline{\underline{31,027 \text{ cm}}}$$

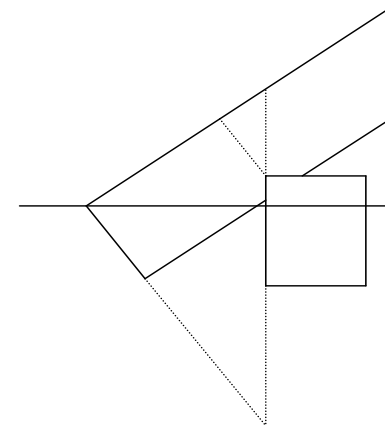
Taufabschnitt:

$$sOh = 3,30 : \cos 34,00 = \underline{\underline{3,981 \text{ cm}}}$$

$$Aw \text{ Sp.} = 90,00^\circ$$

$$\beta = 90,00 - 34,00 = \underline{\underline{56,00^\circ}}$$

$$hu = 10,00 \times \tan 56,00 = \underline{\underline{14,83 \text{ cm}}}$$



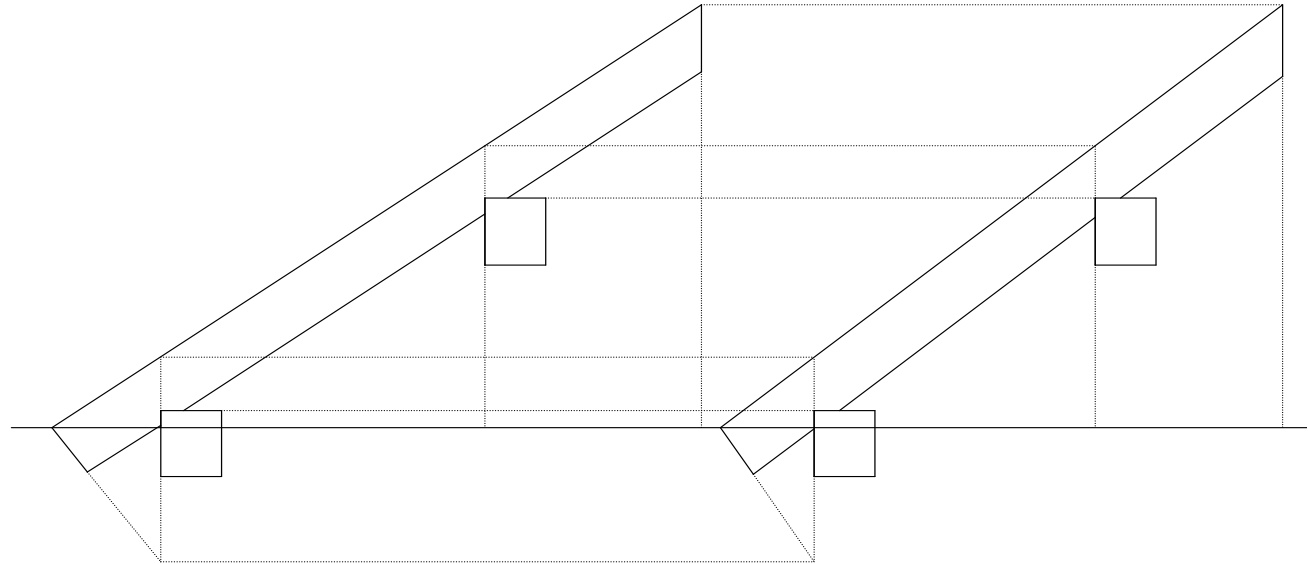
Anbauprofil:

DN Ab = 40,00 °

gleiches sOh

gleiche Mb/Pf OK

Abschnitt angepasst



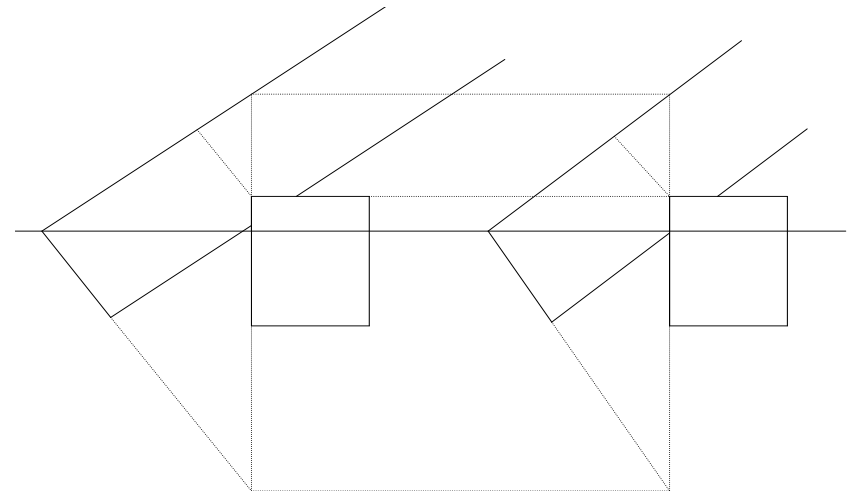
$$\begin{aligned} h1 \text{ Ab} &= 6,745 \text{ cm} \\ h2 \text{ Ab} &= 23,608 \text{ cm} \\ h \text{ Ab} &= 31,027 \text{ cm} \end{aligned}$$

$$\begin{aligned} g1 \text{ Ab} &= 6,75 : \tan 40,00 = \underline{\underline{8,038 \text{ cm}}} \\ g2 \text{ Ab} &= 23,61 : \tan 40,00 = \underline{\underline{28,135 \text{ cm}}} \\ g \text{ Ab} &= 31,03 : \tan 40,00 = \underline{\underline{36,977 \text{ cm}}} \end{aligned}$$

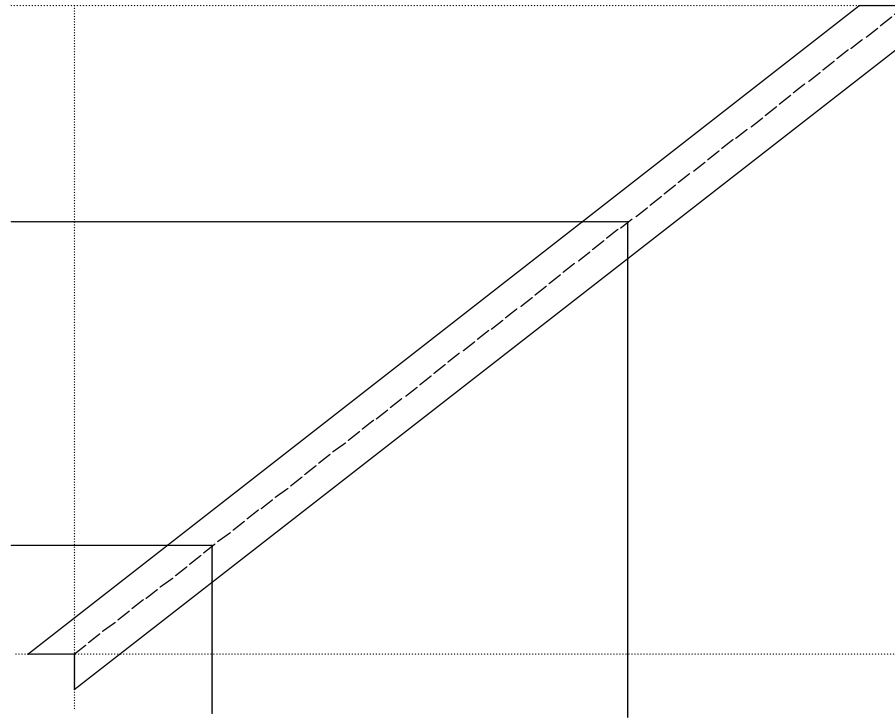
$$\begin{aligned} s1 \text{ Ab} &= 8,04 : \cos 40,00 = \underline{\underline{10,493 \text{ cm}}} \\ s2 \text{ Ab} &= 28,13 : \cos 40,00 = \underline{\underline{36,727 \text{ cm}}} \\ s \text{ Ab} &= 36,98 : \cos 40,00 = \underline{\underline{48,270 \text{ cm}}} \end{aligned}$$

Traufabschnitt Ab
angepasst

$$\begin{aligned} sOh &= 3,981 \text{ cm} \\ hu &= 14,83 \text{ cm} \\ \beta &= \tan^{-1} \frac{14,83}{8,038} = 61,5333 \text{ °} \\ Aw \text{ Sp.} &= 40,00 + 61,533 = \underline{\underline{101,533 \text{ °}}} \end{aligned}$$



Wersatz:



Kehlgrundwinkel:

$$\alpha_{\text{KGW HD}} = \text{Tan-1} \frac{46,00}{36,977} = 51,206 \text{ } ^\circ$$

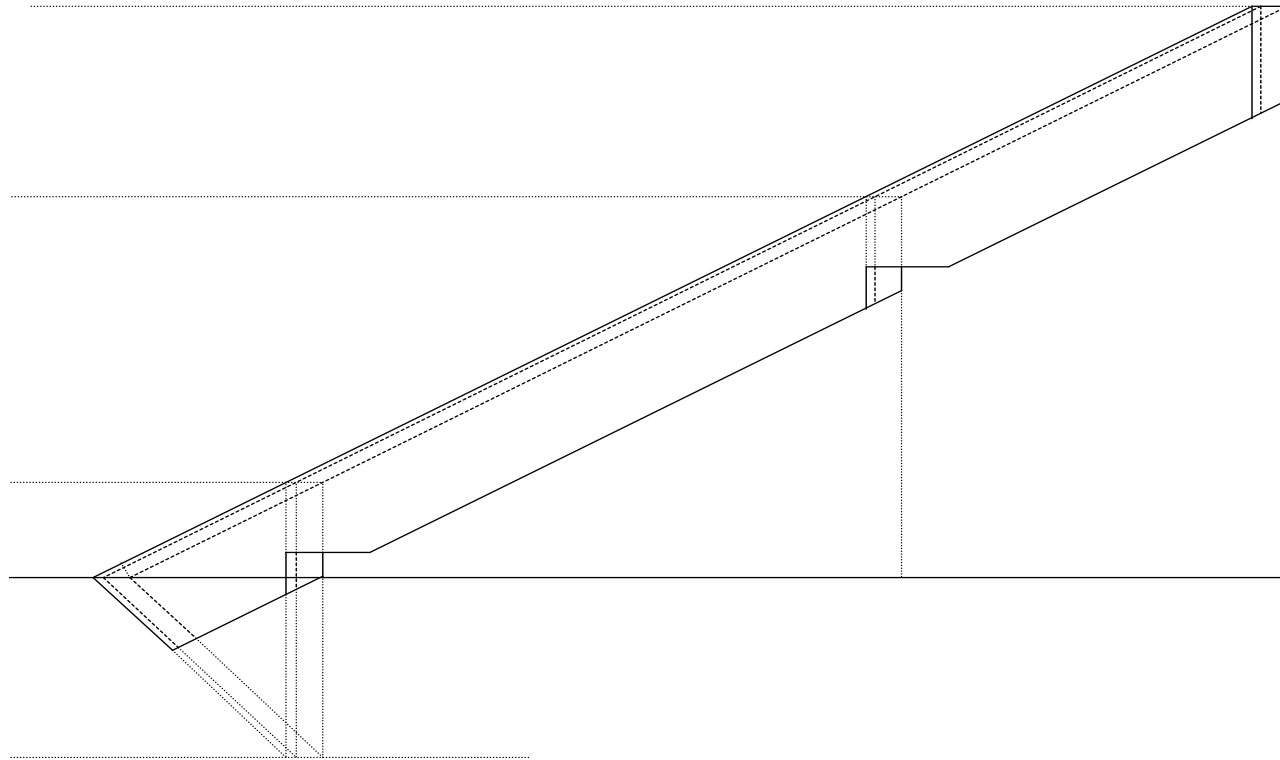
$$\alpha_{\text{KGW Ab}} = \text{Tan-1} \frac{36,98}{46,00} = 38,794 \text{ } ^\circ$$

Kehlsparregrundmaße:

G1 HD	=	10,00	:	Sin	51,2060	=	12,830	cm
G2 HD	=	35,00	:	Sin	51,2060	=	44,906	cm
G HD	=	46,00	:	Sin	51,2060	=	59,019	cm

G1 Ab	=	8,04	:	Sin	38,7940	=	12,830	cm
G2 Ab	=	28,13	:	Sin	38,7940	=	44,906	cm
G Ab	=	36,98	:	Sin	38,7940	=	59,019	cm

Kehlsparrenprofil:

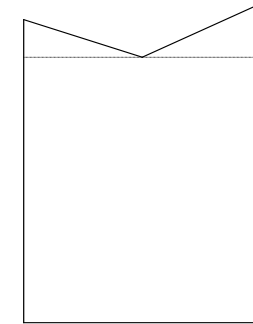
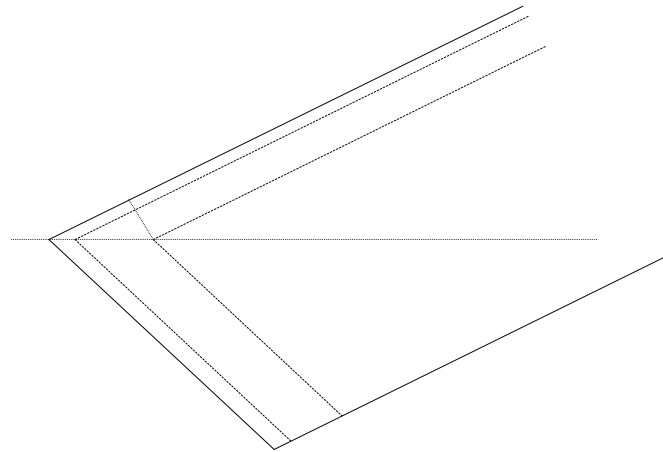
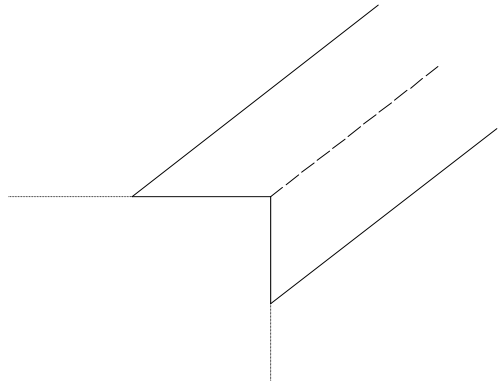


$$\alpha \text{ Kehle} = \text{Tan-1} \frac{31,03}{59,019} = \underline{\underline{27,7316^\circ}}$$

S1 HD	=	12,83	:	Cos	27,732	=	14,495	cm
S2 HD	=	44,91	:	Cos	27,732	=	50,734	cm
S HD	=	59,02	:	Cos	27,732	=	66,678	cm

S1 Ab	=	12,83	:	Cos	27,732	=	14,495	cm
S2 Ab	=	44,91	:	Cos	27,732	=	50,734	cm
S Ab	=	59,02	:	Cos	27,732	=	66,678	cm

Verstich, Auskehlung, Maschinenwinkel:



$$\text{Vst HD} = 2,00 \quad / \text{Tan} \quad 51,2060 \quad = \quad \underline{\underline{1,6077 \text{ cm}}}$$

$$\text{Ausk HD} = 1,608 \quad \times \text{Sin} \quad 27,7316 \quad = \quad \underline{\underline{0,748 \text{ cm}}}$$

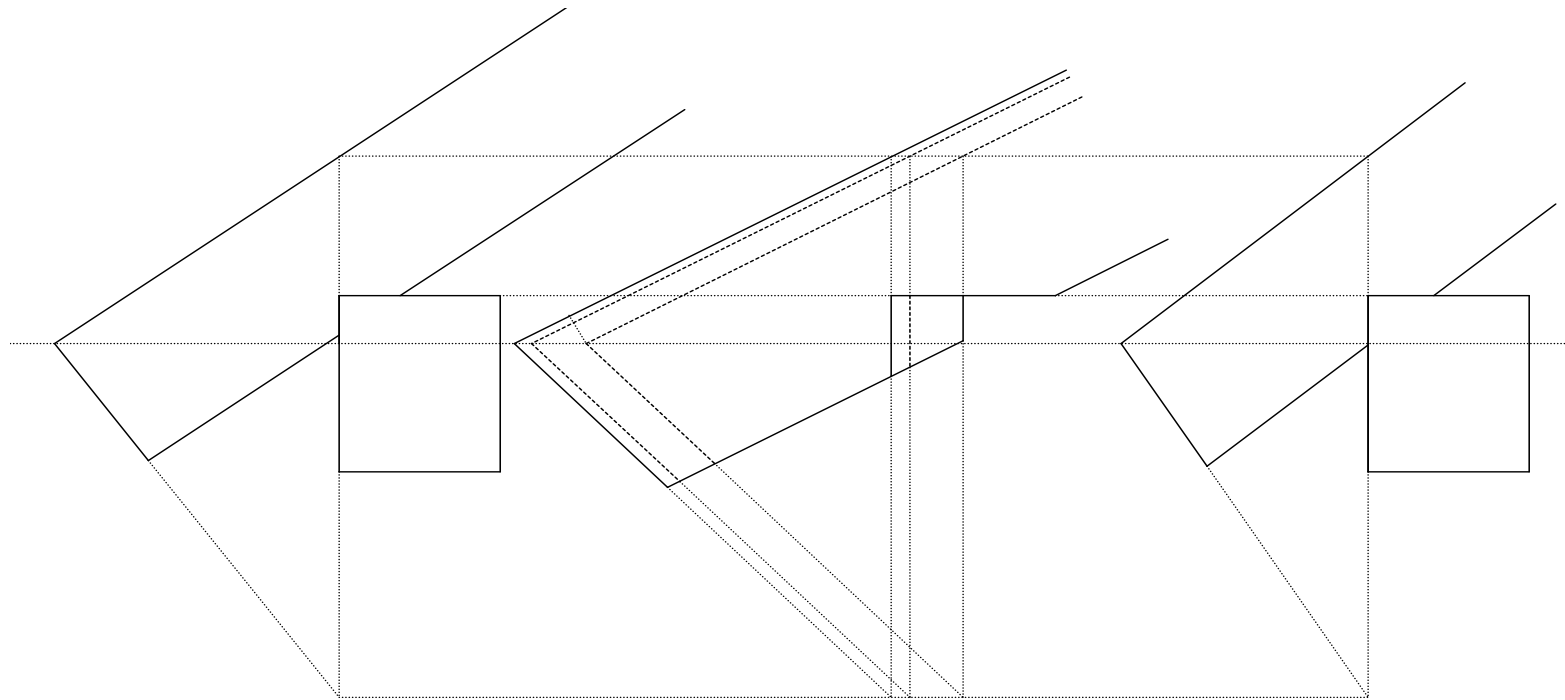
$$\alpha \text{ Mw} = \text{Tan}^{-1} \quad \frac{0,748}{2,000} \quad = \quad \underline{\underline{20,5085 \text{ }^\circ}}$$

$$\text{Vst Ab} = 2,00 \quad / \text{Tan} \quad 38,7940 \quad = \quad \underline{\underline{2,4880 \text{ cm}}}$$

$$\text{Ausk Ab} = 2,488 \quad \times \text{Sin} \quad 27,7316 \quad = \quad \underline{\underline{1,158 \text{ cm}}}$$

$$\alpha \text{ Mw} = \text{Tan}^{-1} \quad \frac{1,158}{2,000} \quad = \quad \underline{\underline{30,0656 \text{ }^\circ}}$$

Abschnittswinkel Kehle:



$$\beta_{HD} = 90,00 - 34,00 = \underline{\underline{56,00}} \text{ } ^\circ$$

$$hu_{HD} = 10,0 \times \tan 56,00 = \underline{\underline{14,826}} \text{ cm}$$

$$\beta_{Kehle} = \tan^{-1} \frac{14,826}{12,830} = \underline{\underline{49,1266}} \text{ } ^\circ$$

$$Aw_{Kehle\ HD} = 27,7316 + 49,1266 = \underline{\underline{76,8581}} \text{ } ^\circ$$

$$\beta_{Ab} = 101,53 - 40,00 = \underline{\underline{61,53}} \text{ } ^\circ$$

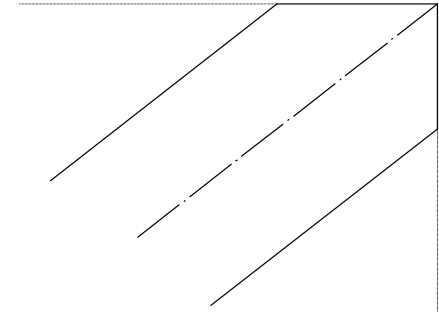
$$hu_{Ab} = 8,038 \times \tan 61,53 = \underline{\underline{14,826}} \text{ cm}$$

$$\beta_{Kehle} = \tan^{-1} \frac{14,826}{12,830} = \underline{\underline{49,1266}} \text{ } ^\circ$$

$$Aw_{Kehle\ Ab} = 27,7316 + 49,1266 = \underline{\underline{76,8581}} \text{ } ^\circ$$

Schifter:

g Ab = 36,977 cm
DN Ab = 40,00 °
 α GGW Ab = 38,7940 °
Traufenlänge Ab = 8,20 cm
Firstlänge Ab = 54,20 cm
Fixmaß Sch 1 Ab = 31,30 cm
Sparren: 2,50 / 4,50
Gratsp.: 4,00 / 5,80



Anbau Schifter:

A Ab =	2,00	: Sin	38,7940	=	3,192	cm
Tm Sch1 =	31,30	-	3,192	=	28,108	cm
Gm Sch 1 =	28,108	x Tan	38,794	=	22,594	cm
Sch 1 =	22,594	: cos	40,00	=	29,495	cm
Vst Gm =	2,50	xTan	38,7940	=	<u>2,010</u>	cm

