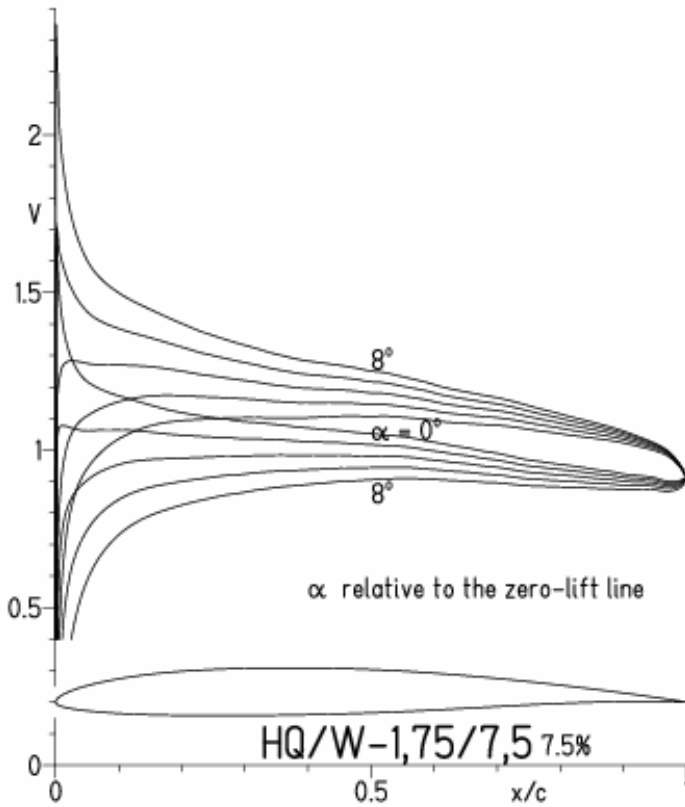


HQ/W-1,75/7,5, N=11

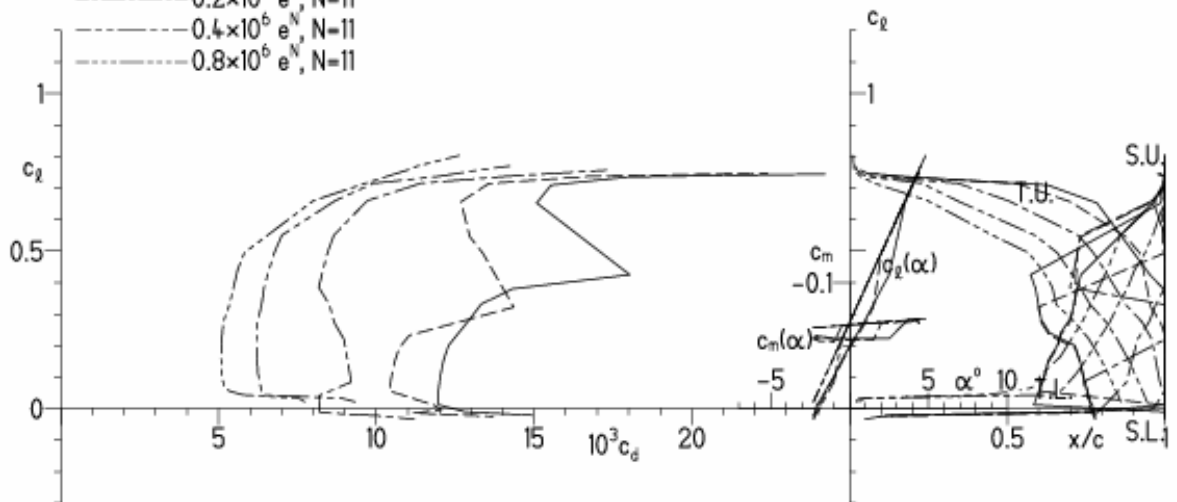
EPPLER 2005 V. 8.5.07 RUN 18.4.11 11:07



EPPLER 2005 V. 8.5.07 RUN 18.4.11 11:07

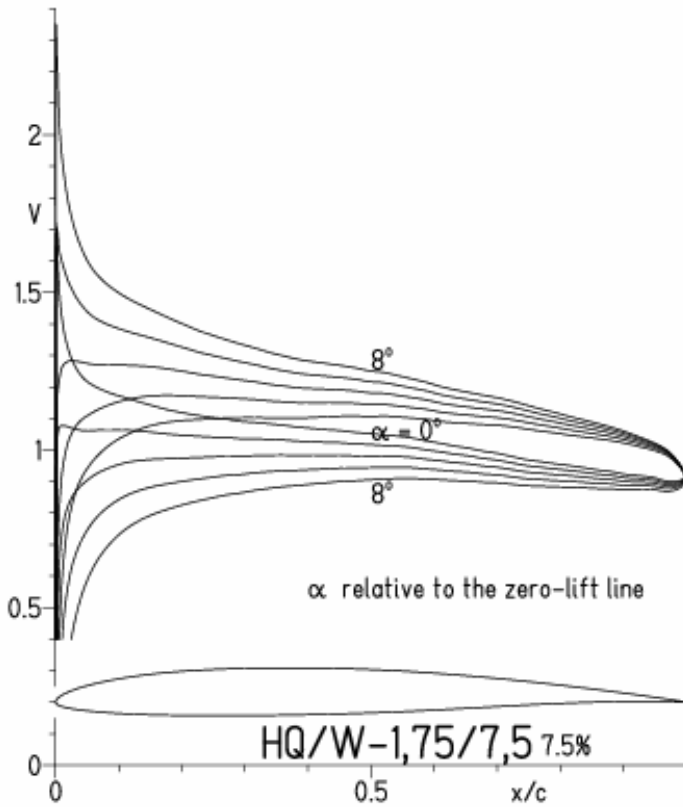
HQ/W-1,75/7,5 7.5%

- $Re = 75\,000 e^N, N=11$
- - -  $0.1 \times 10^6 e^N, N=11$
- · -  $0.2 \times 10^6 e^N, N=11$
- · · -  $0.4 \times 10^6 e^N, N=11$
- · · · -  $0.8 \times 10^6 e^N, N=11$



HQ/W-1,75/7,5, N=9

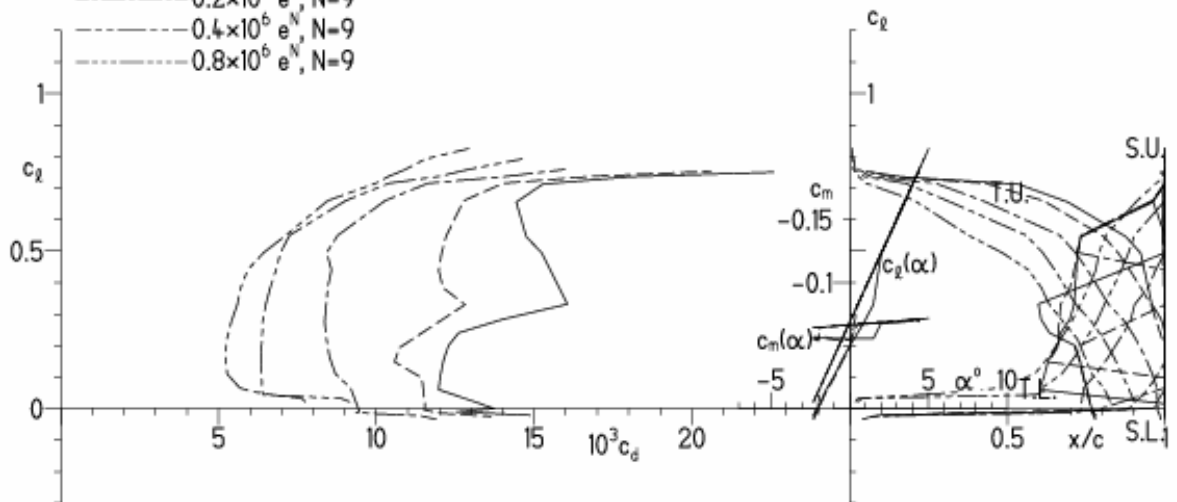
EPPLER 2005 V. 8.5.07 RUN 18.4.11 11:15



EPPLER 2005 V. 8.5.07 RUN 18.4.11 11:15

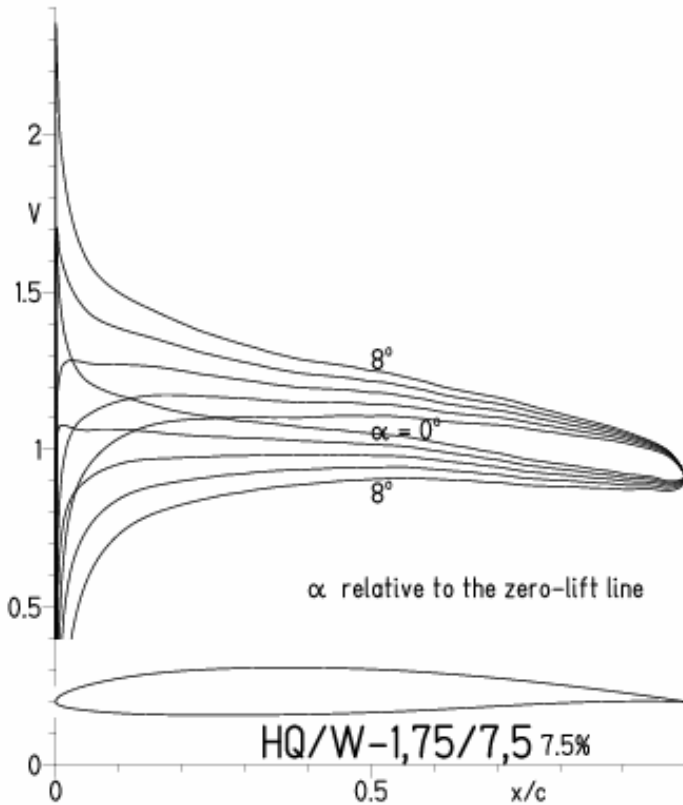
HQ/W-1,75/7,5 7.5%

- $Re = 75\,000 e^N, N=9$
- - -  $0.1 \times 10^6 e^N, N=9$
- · -  $0.2 \times 10^6 e^N, N=9$
- · · -  $0.4 \times 10^6 e^N, N=9$
- · · · -  $0.8 \times 10^6 e^N, N=9$



HQ/W-1,75/7,5, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

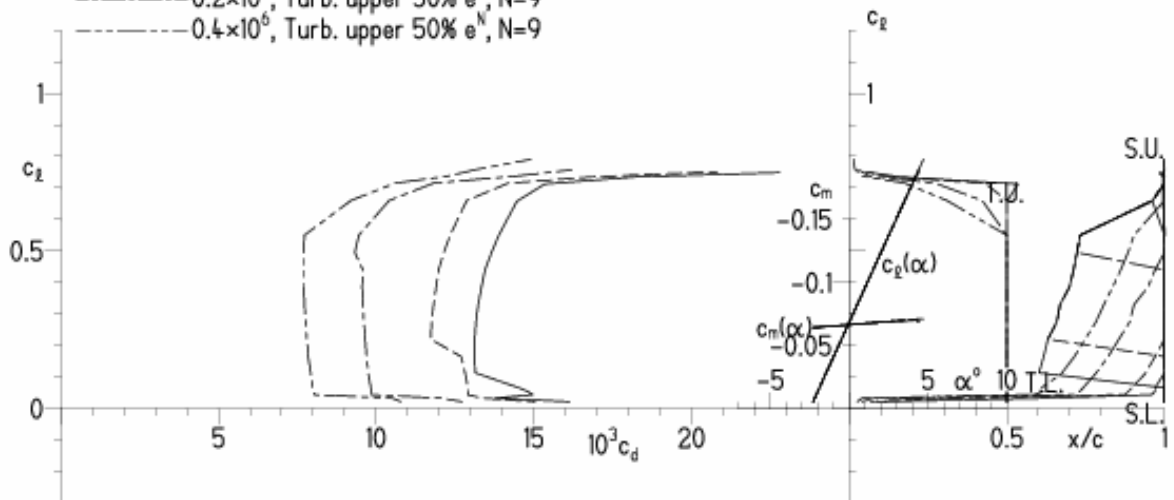
EPPLER 2005 V. 8.5.07 RUN 18.4.11 11:55



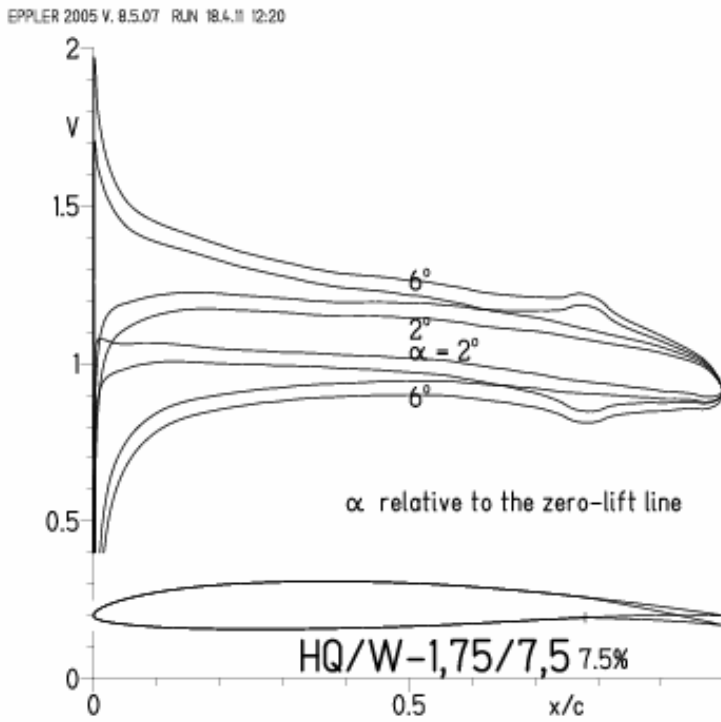
EPPLER 2005 V. 8.5.07 RUN 18.4.11 11:55

**HQ/W-1,75/7,5 7.5%**

- $Re = 75\,000$ , Turb. upper 50%  $e^N$ ,  $N=9$
- - -  $0.1 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$
- · -  $0.2 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$
- - -  $0.4 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$



HQ/W-1,75/7,5, N=11, mit +4° Wölbklappenausschlag

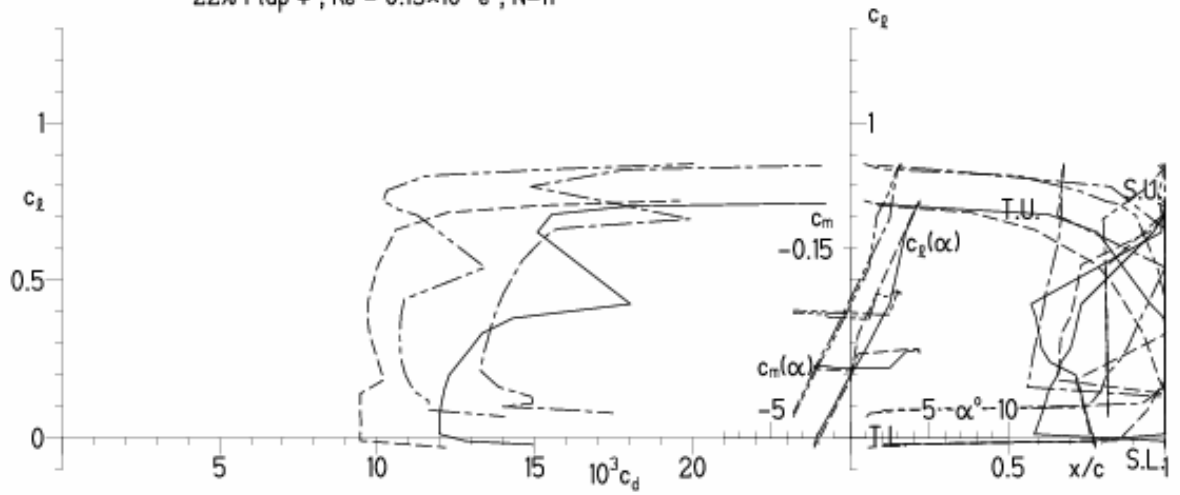


EPPLER 2005 V. 8.5.07 RUN 1

HQ/W-1,75/7,5 7.5%

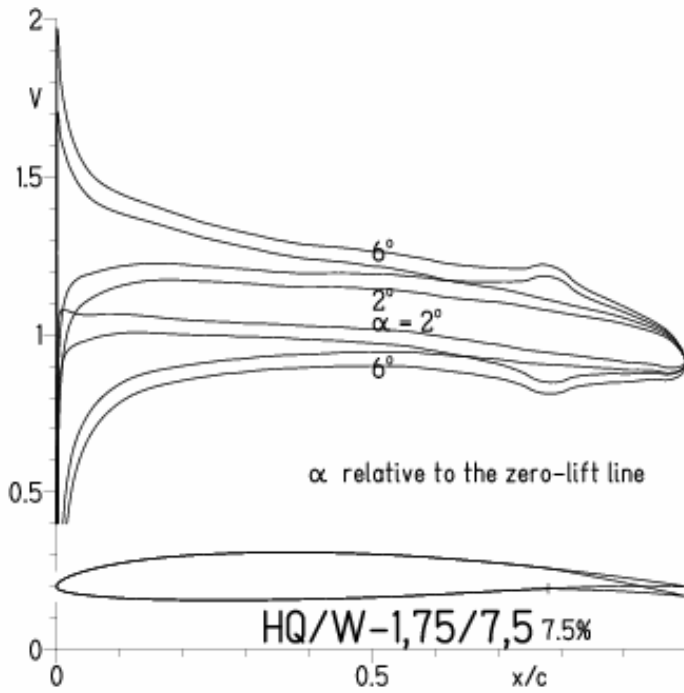
- $Re = 75\,000 e^N, N=11$
- - -  $0.15 \times 10^6 e^N, N=11$
- · - · 22% Flap  $4^\circ, Re = 75\,000 e^N, N=11$
- · - · 22% Flap  $4^\circ, Re = 0.15 \times 10^6 e^N, N=11$

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



HQ/W-1,75/7,5, N=9, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 18.4.11 12:27

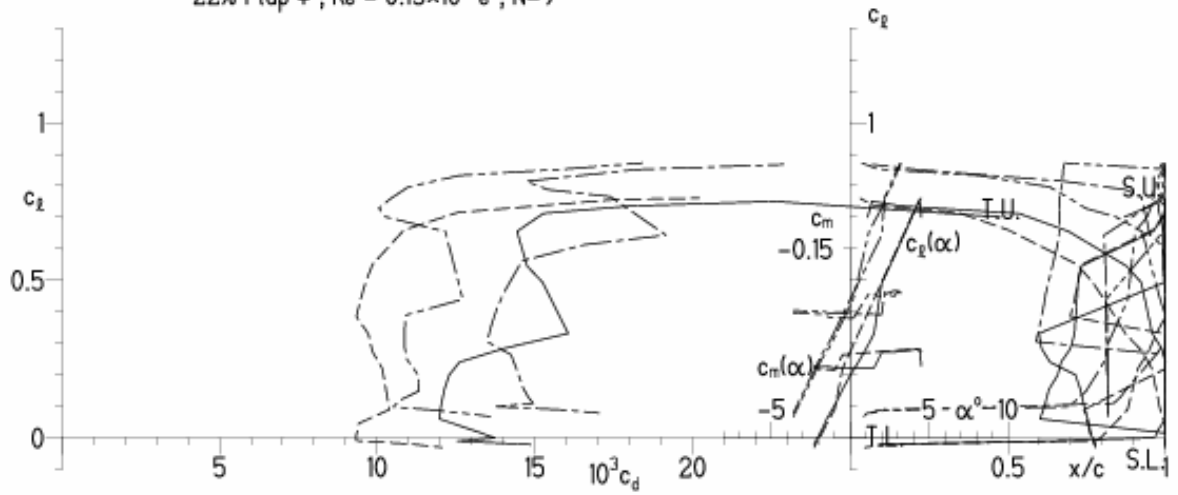


EPPLER 2005 V. 8.5.07 RUN 18.4.11 12:27

HQ/W-1,75/7,5 7.5%

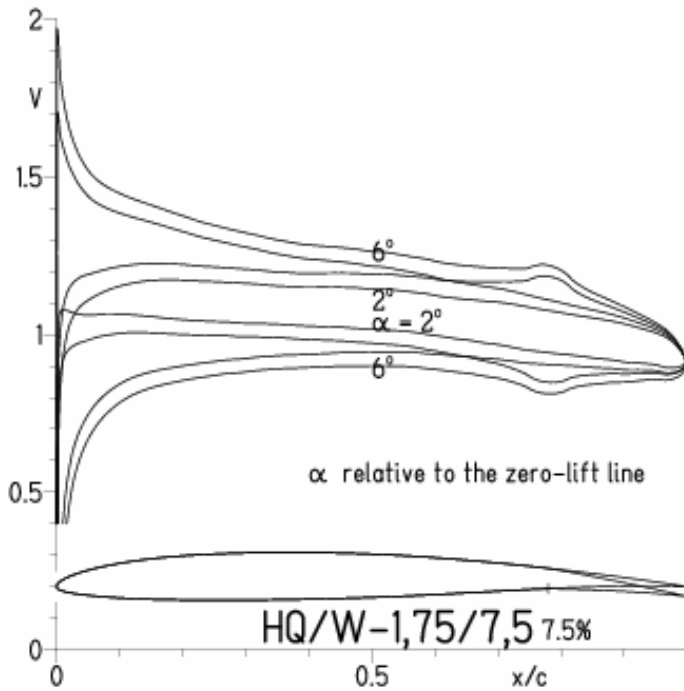
- $Re = 75\,000 e^N, N=9$
- - -  $0.15 \times 10^6 e^N, N=9$
- · - · 22% Flap  $4^\circ, Re = 75\,000 e^N, N=9$
- · - · 22% Flap  $4^\circ, Re = 0.15 \times 10^6 e^N, N=9$

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



**HQ/W-1,75/7,5, N=9, mit +4° Wölbklappenausschlag Turbulatoreffekt**  
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 18.4.11 12:32

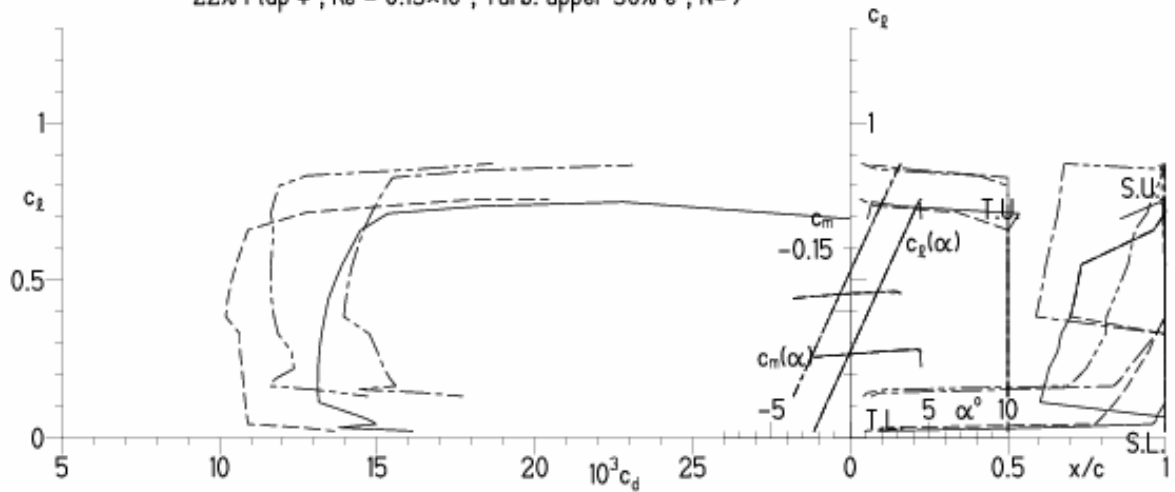


EPPLER 2005 V. 8.5.07 RUN 18.4.11 12:32

**HQ/W-1,75/7,5 7.5%**

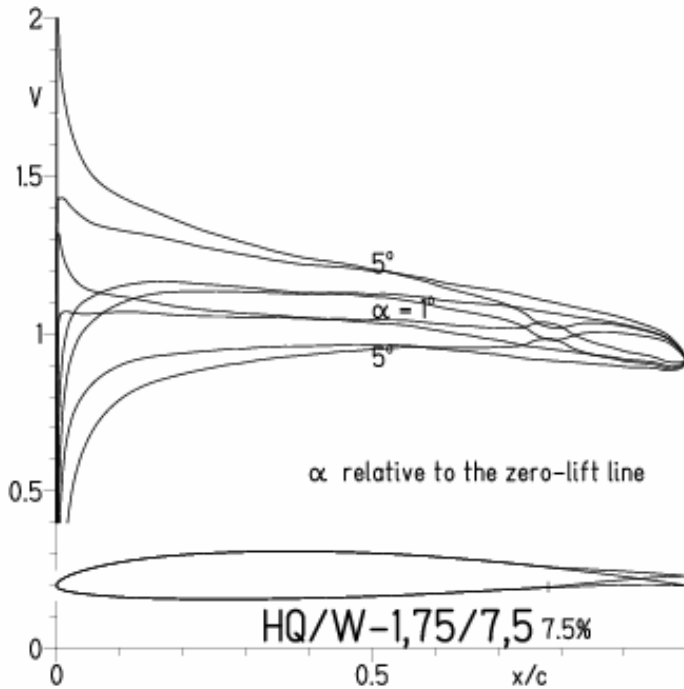
- Re = 75 000, Turb. upper 50% e<sup>N</sup>, N=9
- - - 0.15x10<sup>6</sup>, Turb. upper 50% e<sup>N</sup>, N=9
- · - 22% Flap 4°, Re = 75 000, Turb. upper 50% e<sup>N</sup>, N=9
- · - 22% Flap 4°, Re = 0.15x10<sup>6</sup>, Turb. upper 50% e<sup>N</sup>, N=9

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



HQ/W-1,75/7,5, N=11, mit  $-4^\circ$  Wölbklappenausschlag  
(F3B/F3F-Modelle mit  $50 \text{ g/dm}^2$  erreichen damit gut über  $300 \text{ km/h}$  Höchstgeschwindigkeit)

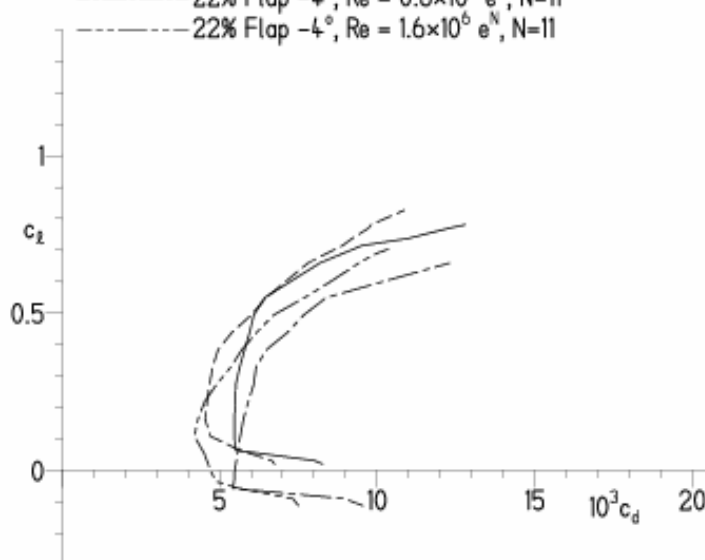
EPPLER 2005 V. 8.5.07 RUN 18.4.11 13:18



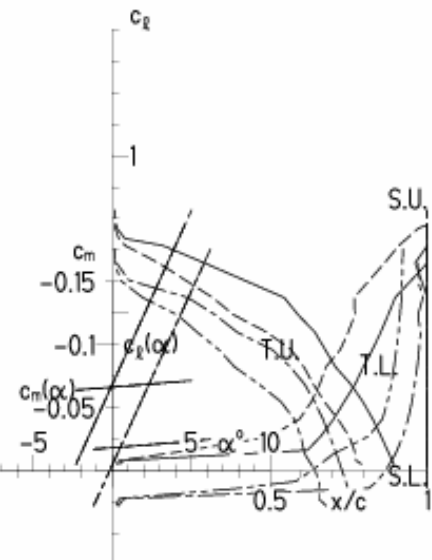
EPPLER 2005 V. 8.5.07 RUN 18.4.11 13:18

### HQ/W-1,75/7,5 7.5%

- $Re = 0.6 \times 10^6$  e<sup>N</sup>, N=11
- - -  $1.6 \times 10^6$  e<sup>N</sup>, N=11
- · -  $22\% \text{ Flap } -4^\circ$ ,  $Re = 0.6 \times 10^6$  e<sup>N</sup>, N=11
- · -  $22\% \text{ Flap } -4^\circ$ ,  $Re = 1.6 \times 10^6$  e<sup>N</sup>, N=11



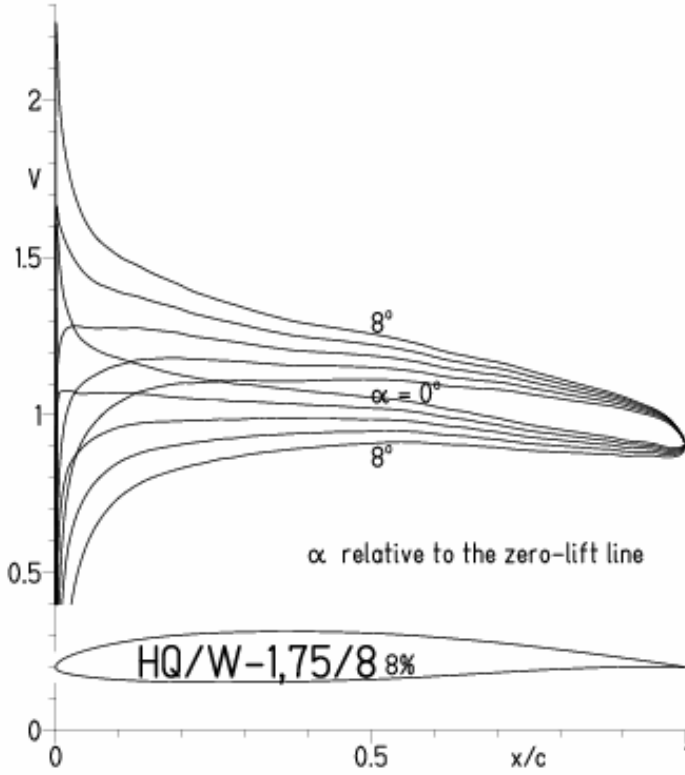
- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



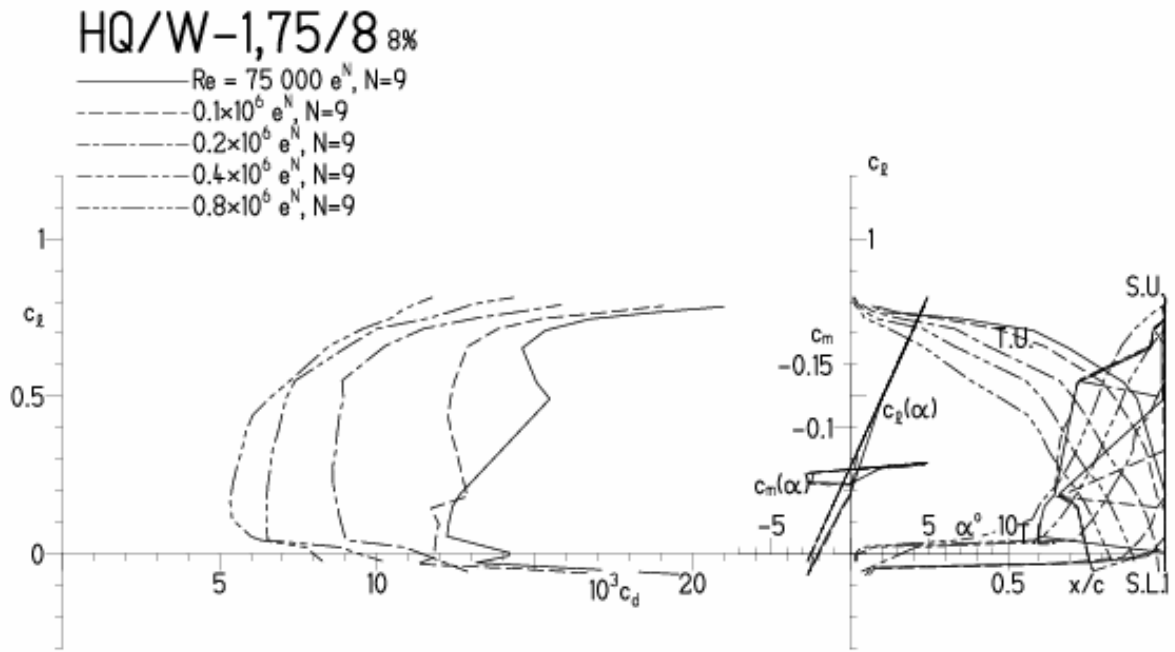


HQ/W-1,75/8, N=9

EPPLER 2005 V. 8.5.07 RUN 18.4.11 17:12

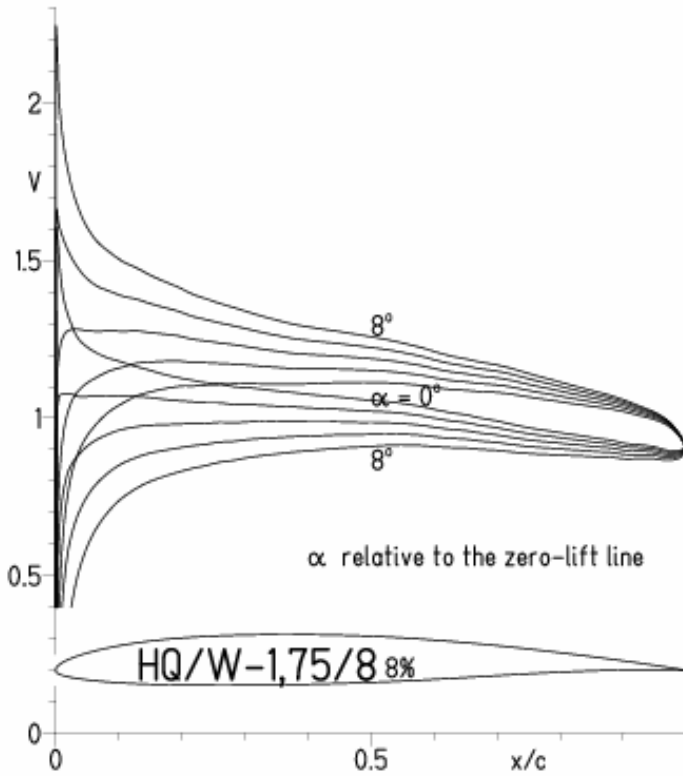


EPPLER 2005 V. 8.5.07 RUN 18.4.11 17:12



HQ/W-1,75/8, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

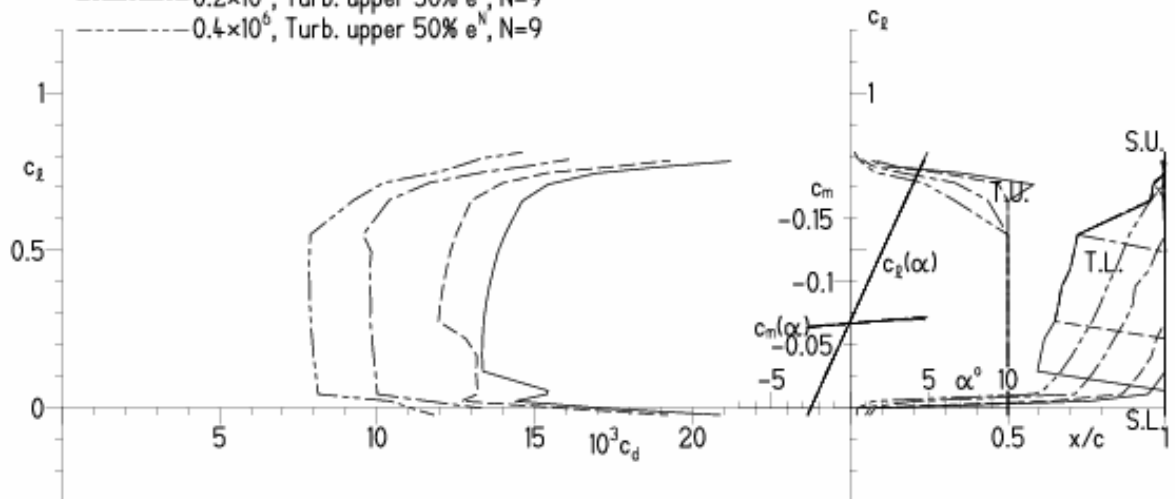
EPPLER 2005 V. 8.5.07 RUN 18.4.11 17:20



EPPLER 2005 V. 8.5.07 RUN 18.4.11 17:20

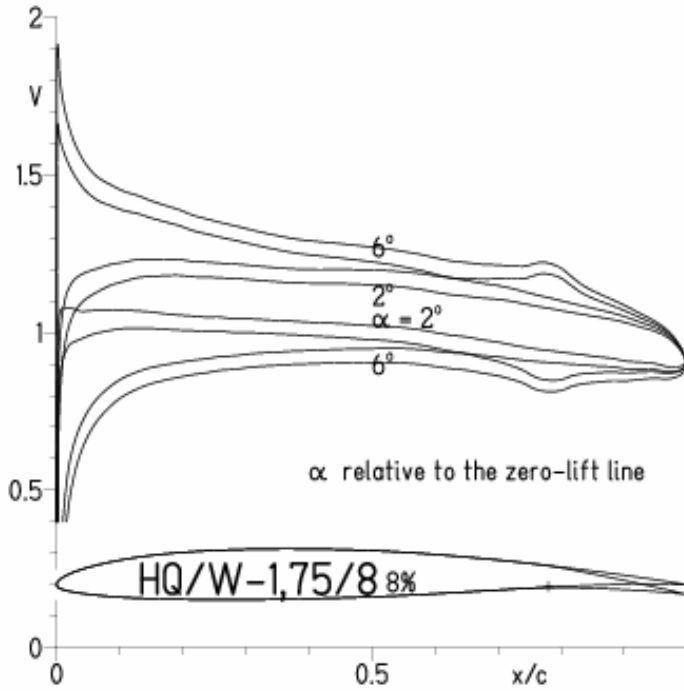
**HQ/W-1,75/8 8%**

- $Re = 75\,000$ , Turb. upper 50%  $e^N$ ,  $N=9$
- - -  $0.1 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$
- · -  $0.2 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$
- - -  $0.4 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$



HQ/W-1,75/8, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 18.4.11 18:42

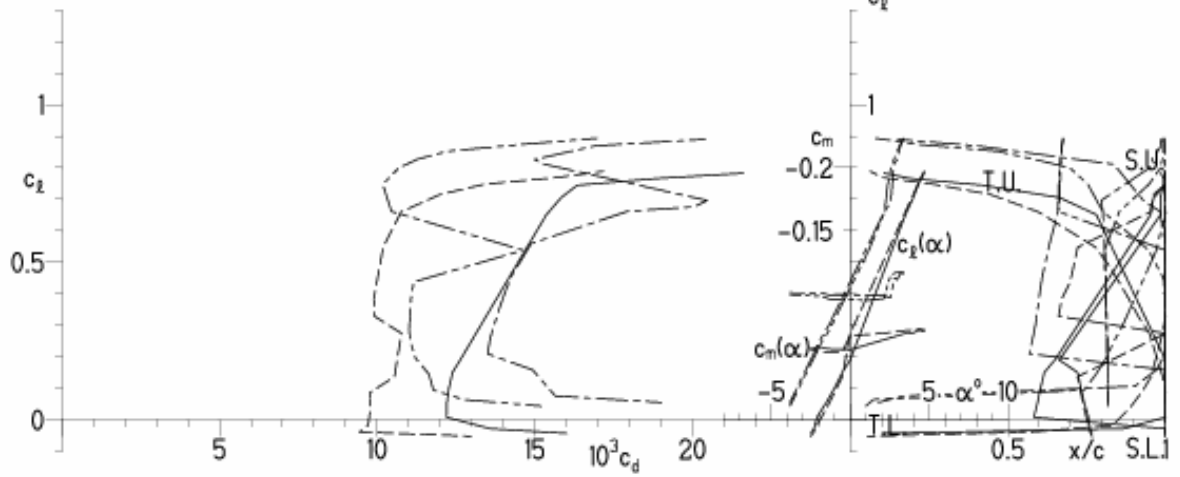


EPPLER 2005 V. 8.5.07 RUN 18.4.11 18:42

HQ/W-1,75/8 8%

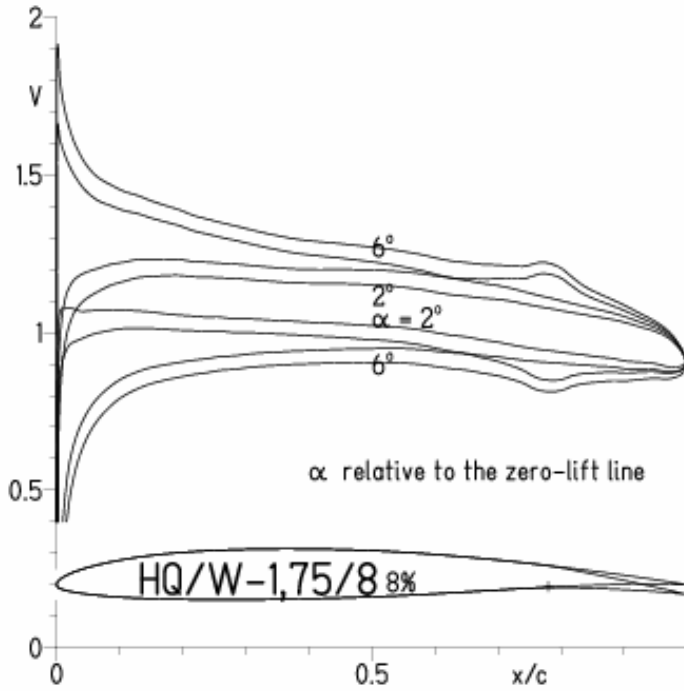
- $Re = 75\,000 e^N, N=11$
- - -  $0.15 \times 10^6 e^N, N=11$
- · - · - 22% Flap  $4^\circ, Re = 75\,000 e^N, N=11$
- · - · - 22% Flap  $4^\circ, Re = 0.15 \times 10^6 e^N, N=11$

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



HQ/W-1,75/8, N=9, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 18.4.11 18:47

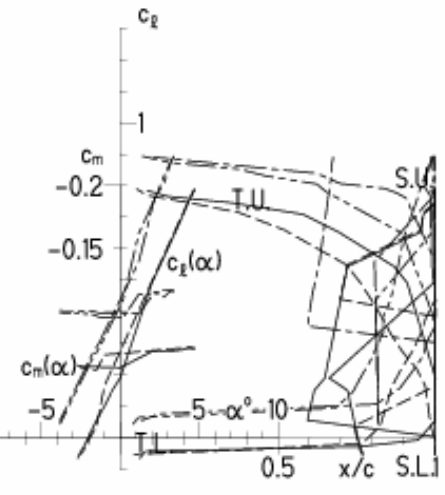
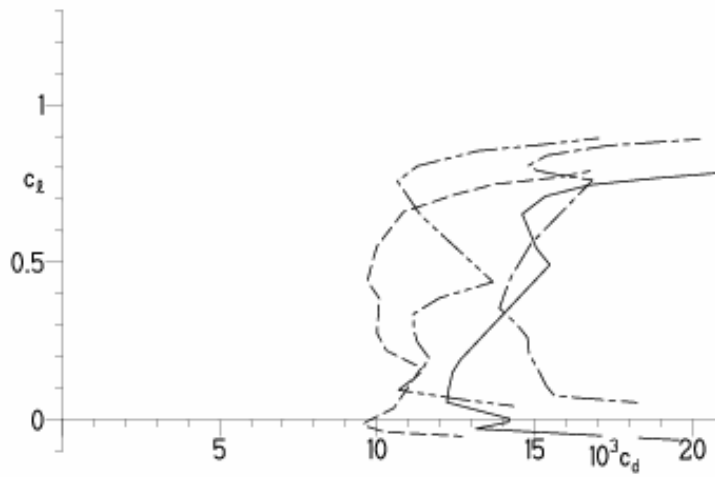


EPPLER 2005 V. 8.5.07 RUN 18.4.11 18:47

HQ/W-1,75/8 8%

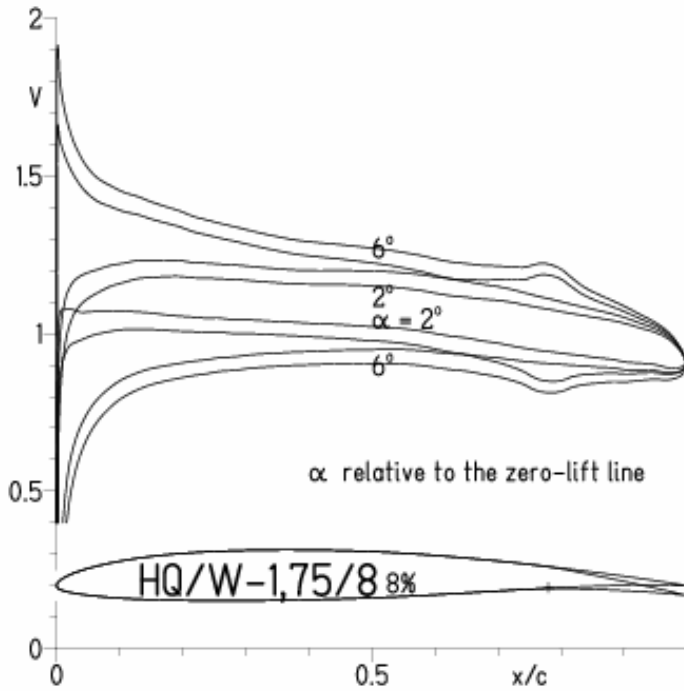
- $Re = 75\,000 e^N, N=9$
- - -  $0.15 \times 10^6 e^N, N=9$
- · - · 22% Flap  $4^\circ, Re = 75\,000 e^N, N=9$
- · - · 22% Flap  $4^\circ, Re = 0.15 \times 10^6 e^N, N=9$

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



**HQ/W-1,75/8, N=9, mit +4° Wölbklappenausschlag, Turbulatoreffekt**  
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 18.4.11 18:51

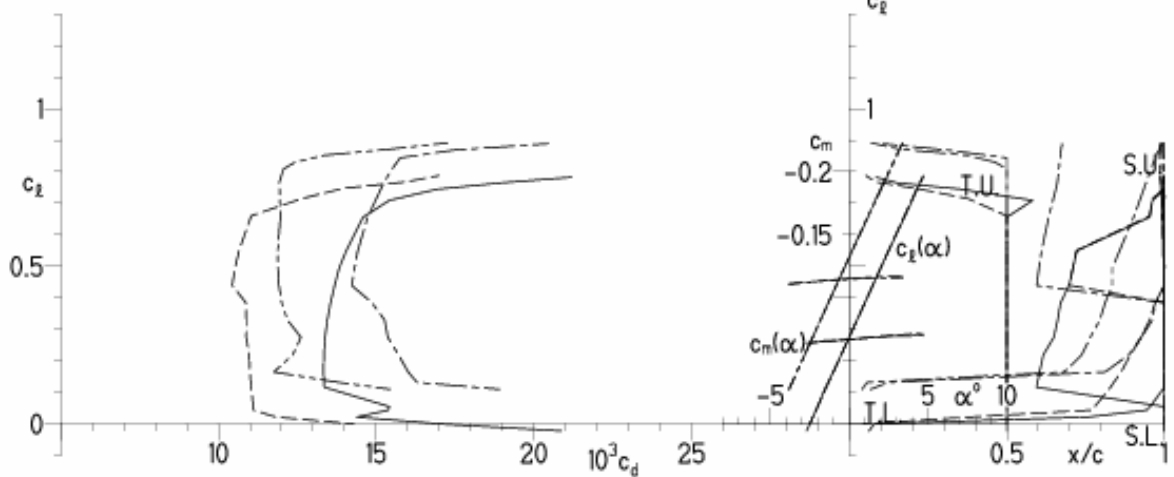


EPPLER 2005 V. 8.5.07 RUN 18.4.11 18:51

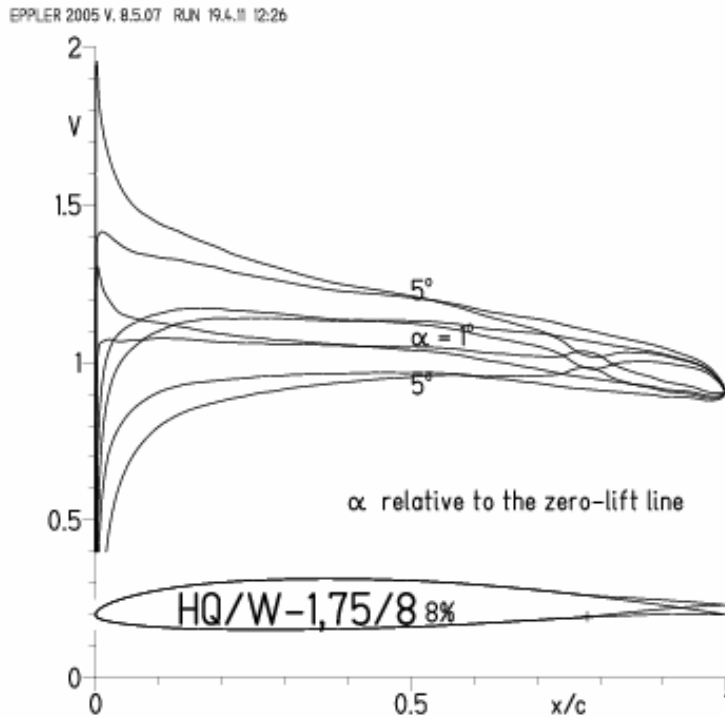
**HQ/W-1,75/8 8%**

- $Re = 75\,000$ , Turb. upper 50%  $e^N$ ,  $N=9$
- - -  $0.15 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$
- · - 22% Flap  $4^\circ$ ,  $Re = 75\,000$ , Turb. upper 50%  $e^N$ ,  $N=9$
- · - 22% Flap  $4^\circ$ ,  $Re = 0.15 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$

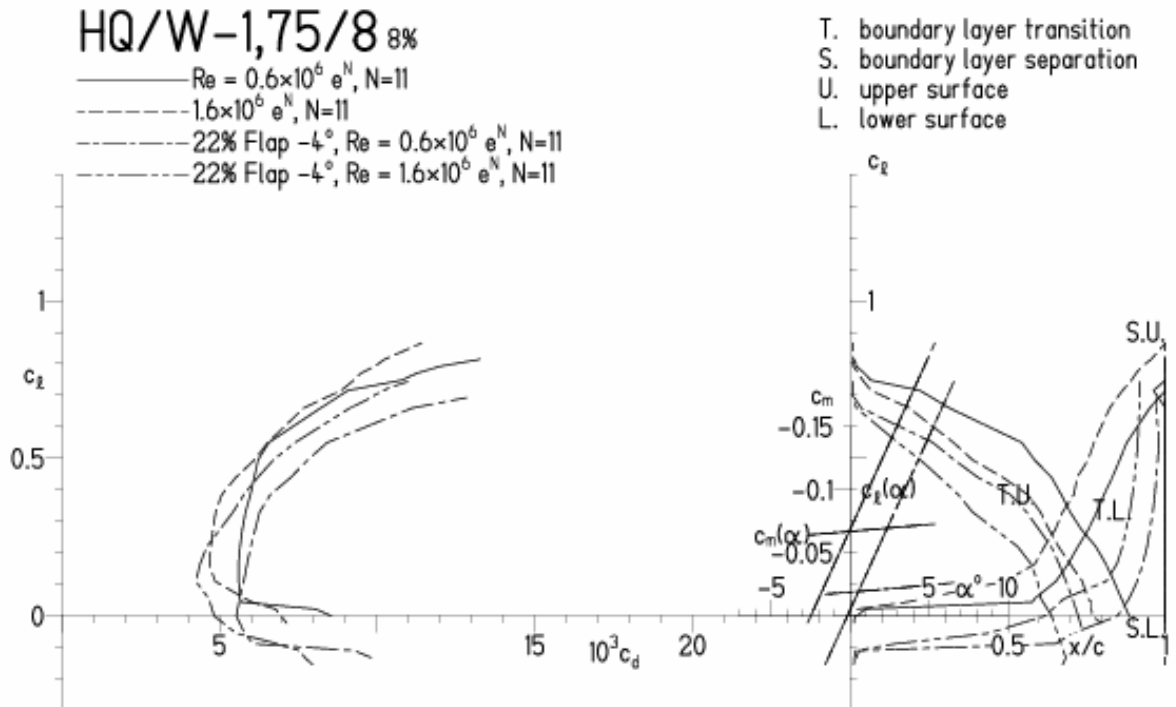
- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



HQ/W-1,75/8, N=11, mit -4° Wölbklappenausschlag  
 (F3B/F3F-Modelle mit 50 g/dm<sup>2</sup> erreichen damit gut über 300 km/h Höchstgeschwindigkeit)

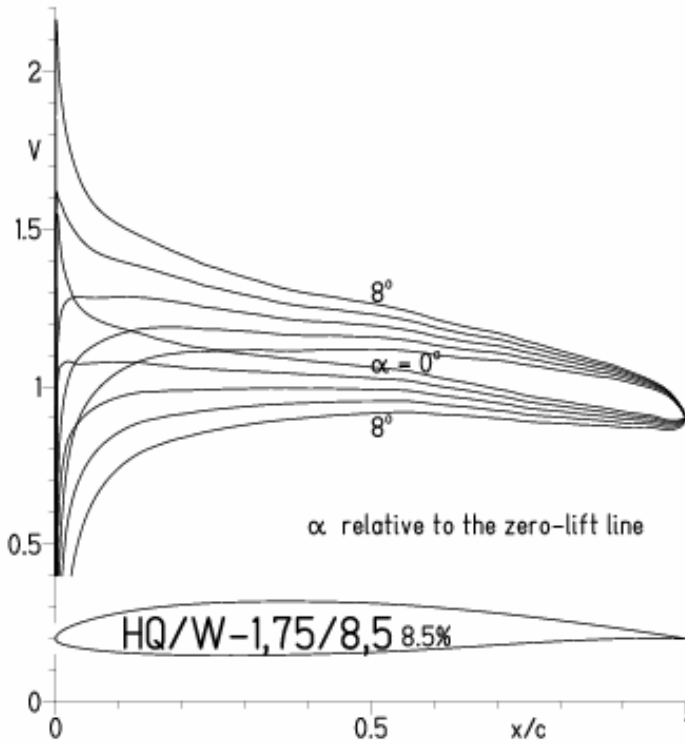


EPPLER 2005 V. 8.5.07 RUN 19.4.11 12:26



HQ/W-1,75/8,5, N=11

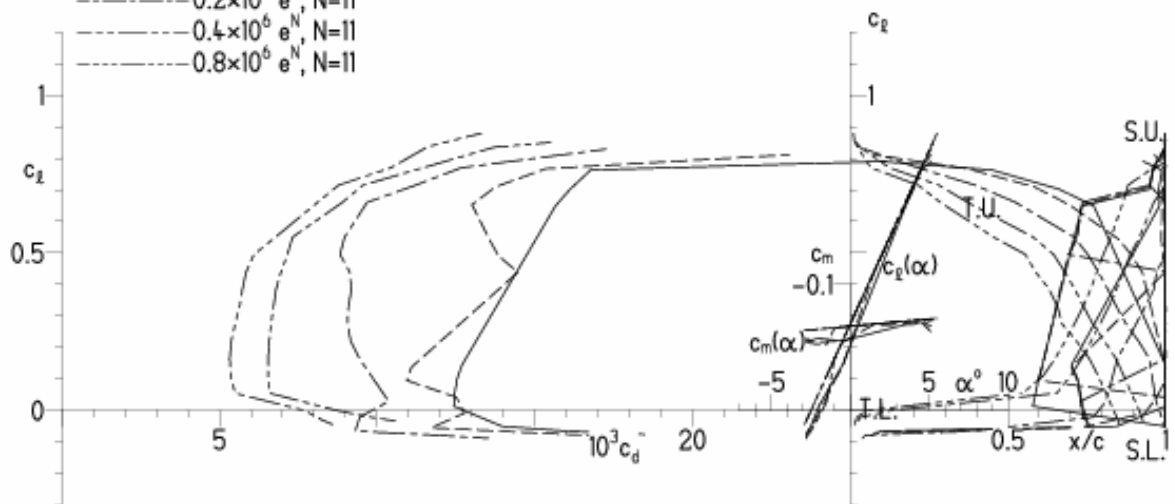
EPPLER 2005 V. 8.5.07 RUN 19.4.11 12:56



EPPLER 2005 V. 8.5.07 RUN 19.4.11 12:56

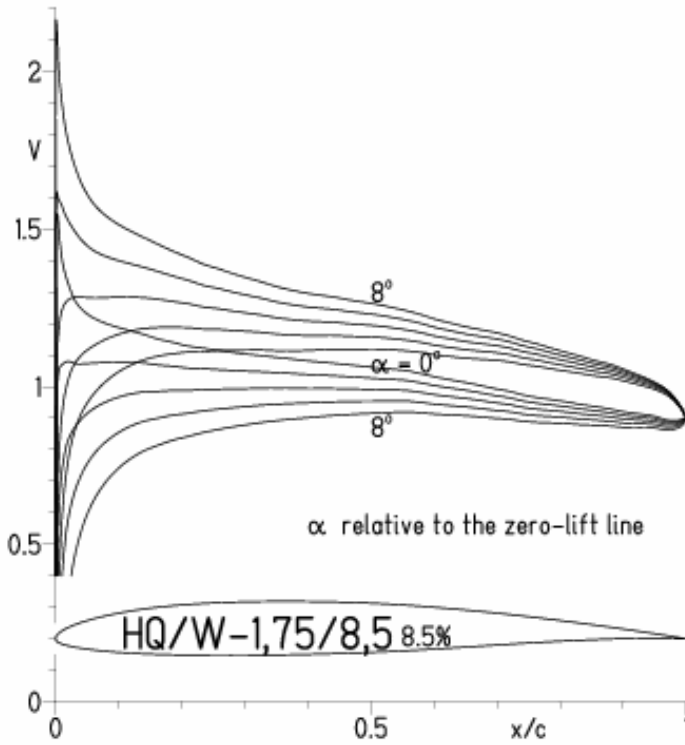
HQ/W-1,75/8,5 8.5%

- $Re = 75\,000 e^N, N=11$
- - -  $0.1 \times 10^6 e^N, N=11$
- · -  $0.2 \times 10^6 e^N, N=11$
- · · -  $0.4 \times 10^6 e^N, N=11$
- · · · -  $0.8 \times 10^6 e^N, N=11$



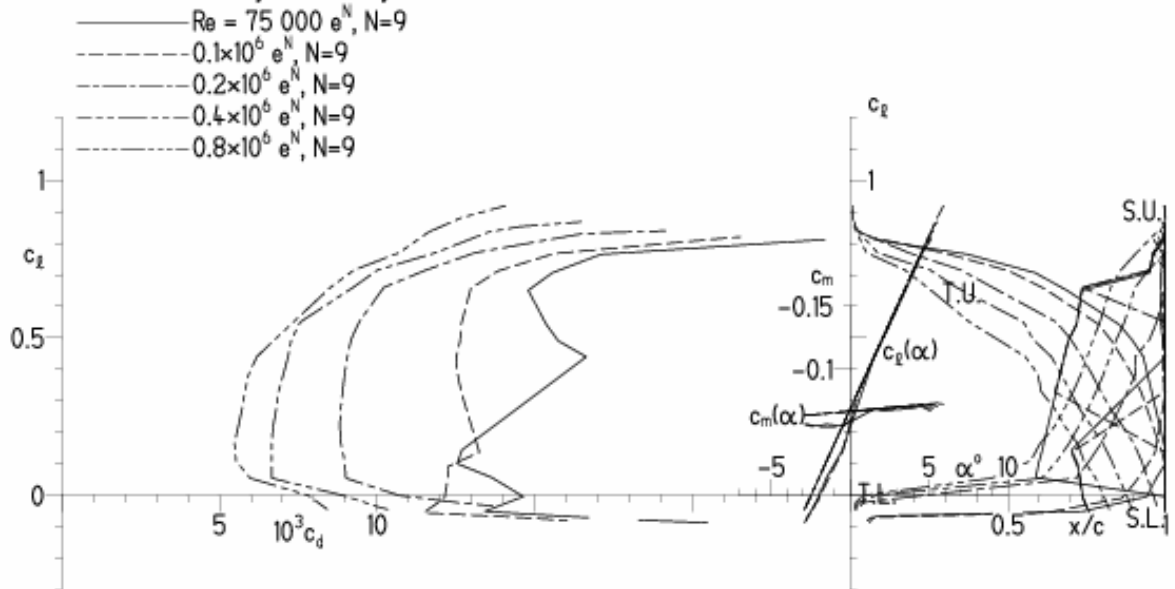
HQ/W-1,75/8,5, N=9

EPPLER 2005 V. 8.5.07 RUN 19.4.11 13:06



EPPLER 2005 V. 8.5.07 RUN 19.4.11 13:06

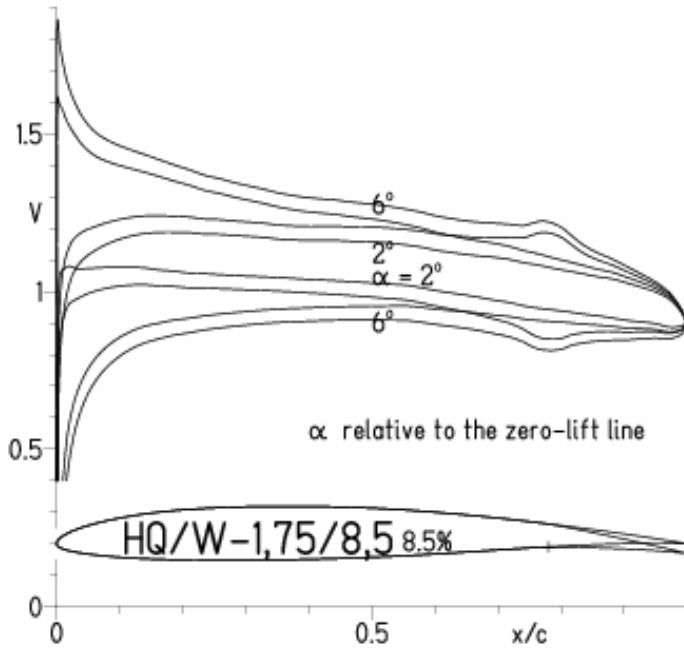
HQ/W-1,75/8,5 8.5%





HQ/W-1,75/8,5, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 20.4.11 16:27

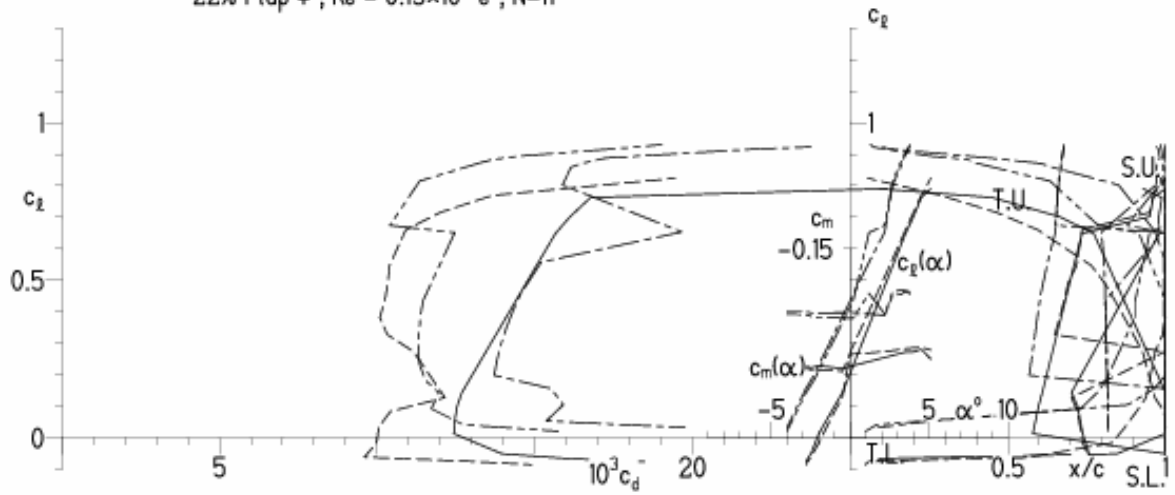


EPPLER 2005 V. 8.5.07 RUN 20.4.11 16:27

HQ/W-1,75/8,5 8.5%

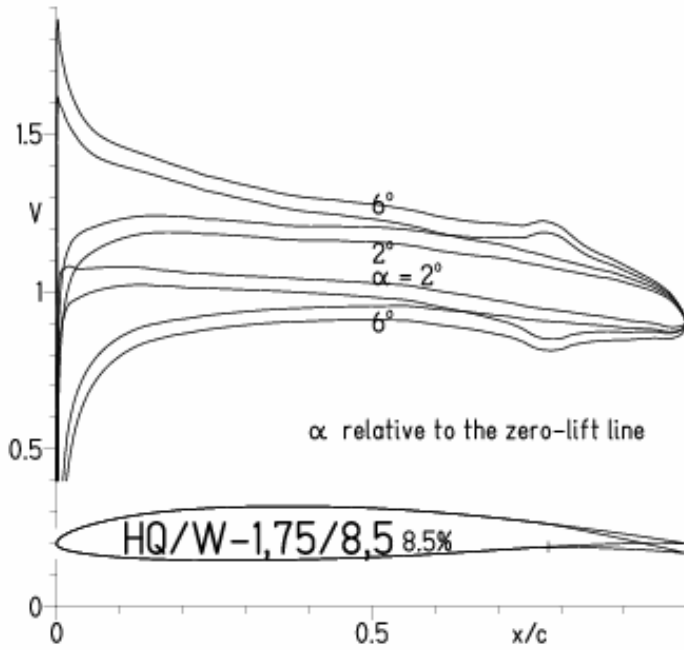
- $Re = 75\,000 e^N, N=11$
- - -  $0.15 \times 10^6 e^N, N=11$
- · - · 22% Flap  $4^\circ, Re = 75\,000 e^N, N=11$
- · - · 22% Flap  $4^\circ, Re = 0.15 \times 10^6 e^N, N=11$

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



HQ/W-1,75/8,5, N=9, mit +4° Wölbklappenausschlag

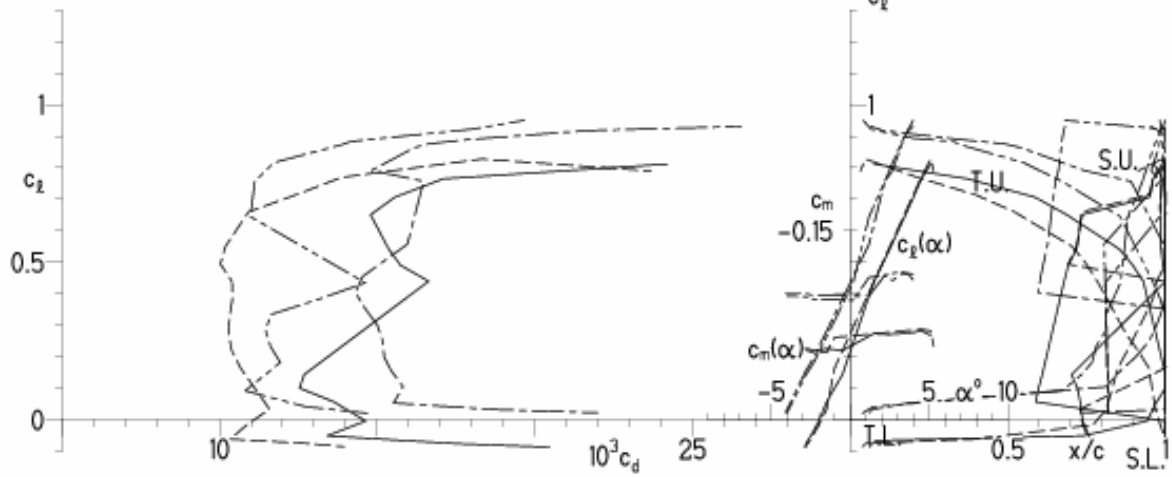
EPPLER 2005 V. 8.5.07 RUN 20.4.11 16:31



EPPLER 2005 V. 8.5.07 RUN 20.4.11 16:31

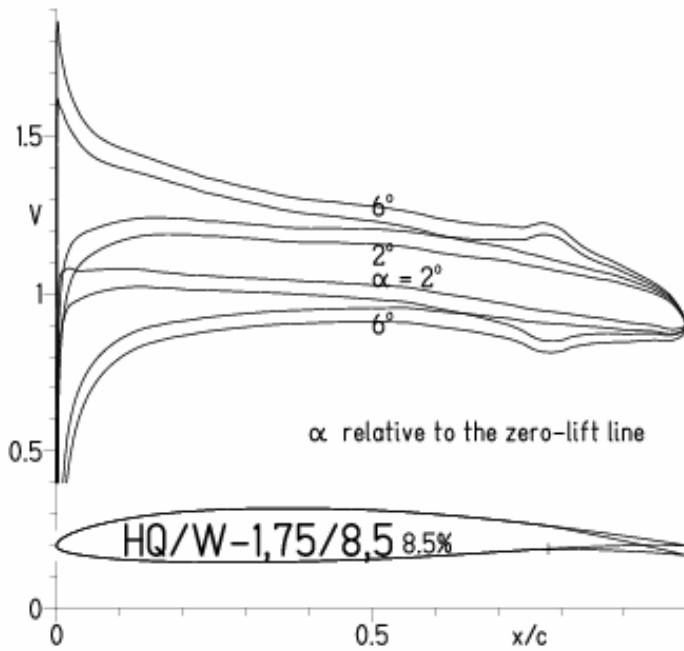
HQ/W-1,75/8,5 8.5%

- $Re = 75\,000 e^N, N=9$
- - -  $0.15 \times 10^6 e^N, N=9$
- · - · 22% Flap  $4^\circ, Re = 75\,000 e^N, N=9$
- · - · 22% Flap  $4^\circ, Re = 0.15 \times 10^6 e^N, N=9$



HQ/W-1,75/8,5, N=9, mit +4° Wölbklappenausschlag, Turbulatoreffekt  
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 20.4.11 16:36

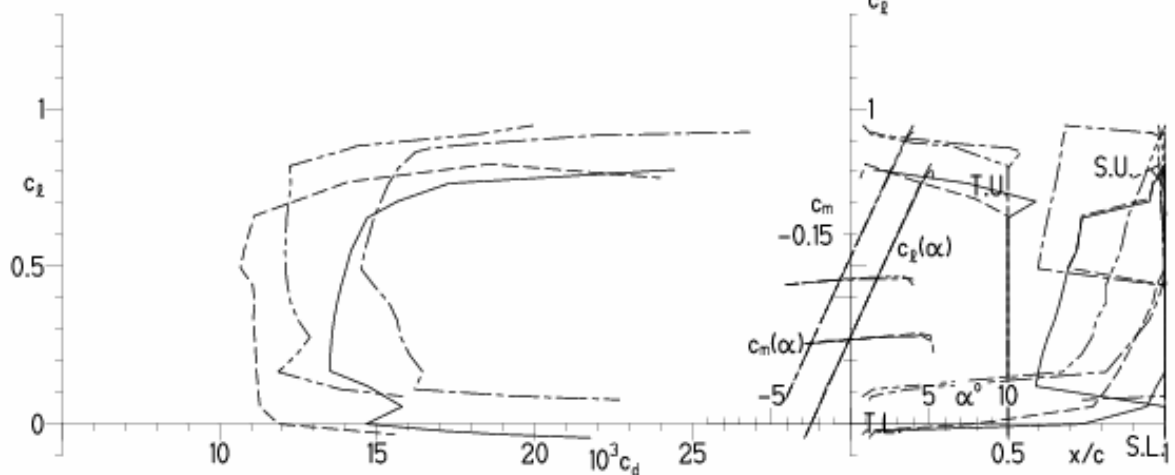


EPPLER 2005 V. 8.5.07 RUN 20.4.11 16:36

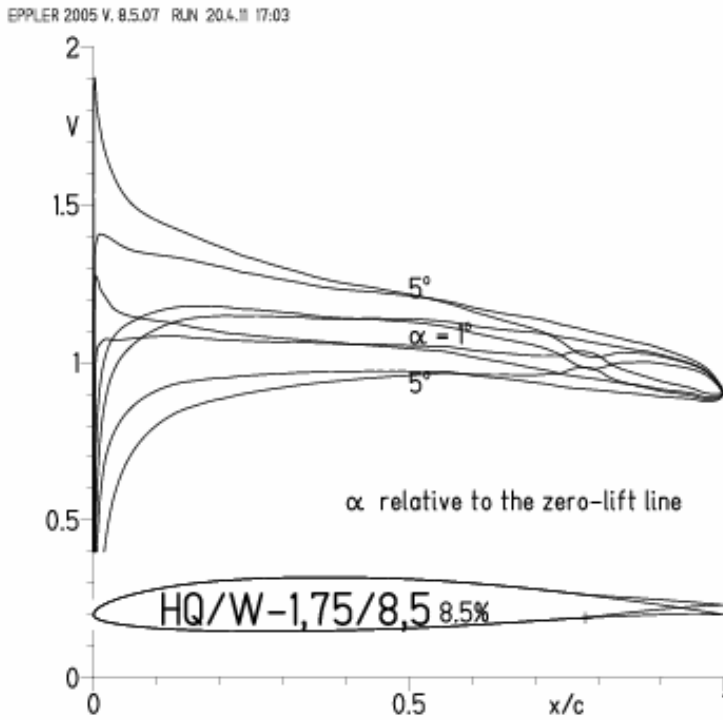
HQ/W-1,75/8,5 8.5%

- Re = 75 000, Turb. upper 50% e<sup>N</sup>, N=9
- - - 0.15×10<sup>6</sup>, Turb. upper 50% e<sup>N</sup>, N=9
- · - 22% Flap 4°, Re = 75 000, Turb. upper 50% e<sup>N</sup>, N=9
- · - 22% Flap 4°, Re = 0.15×10<sup>6</sup>, Turb. upper 50% e<sup>N</sup>, N=9

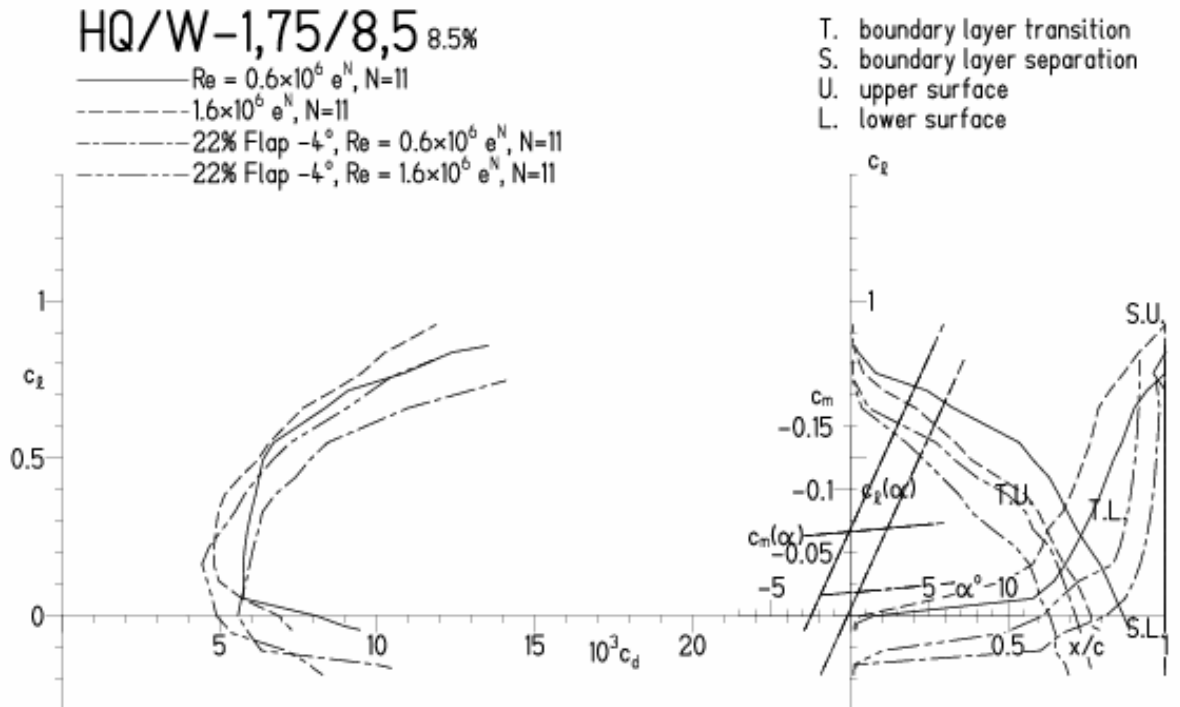
- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



HQ/W-1,75/8,5, N=11, mit  $-4^\circ$  Wölbklappenausschlag  
 (F3B/F3F-Modelle mit  $50 \text{ g/dm}^2$  erreichen damit gut über  $300 \text{ km/h}$  Höchstgeschwindigkeit)

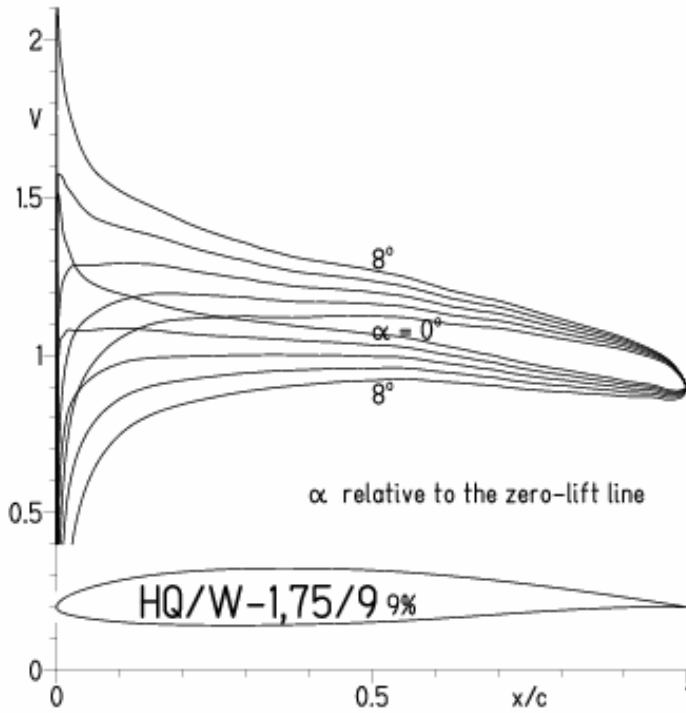


EPPLER 2005 V. 8.5.07 RUN 20.4.11 17:03

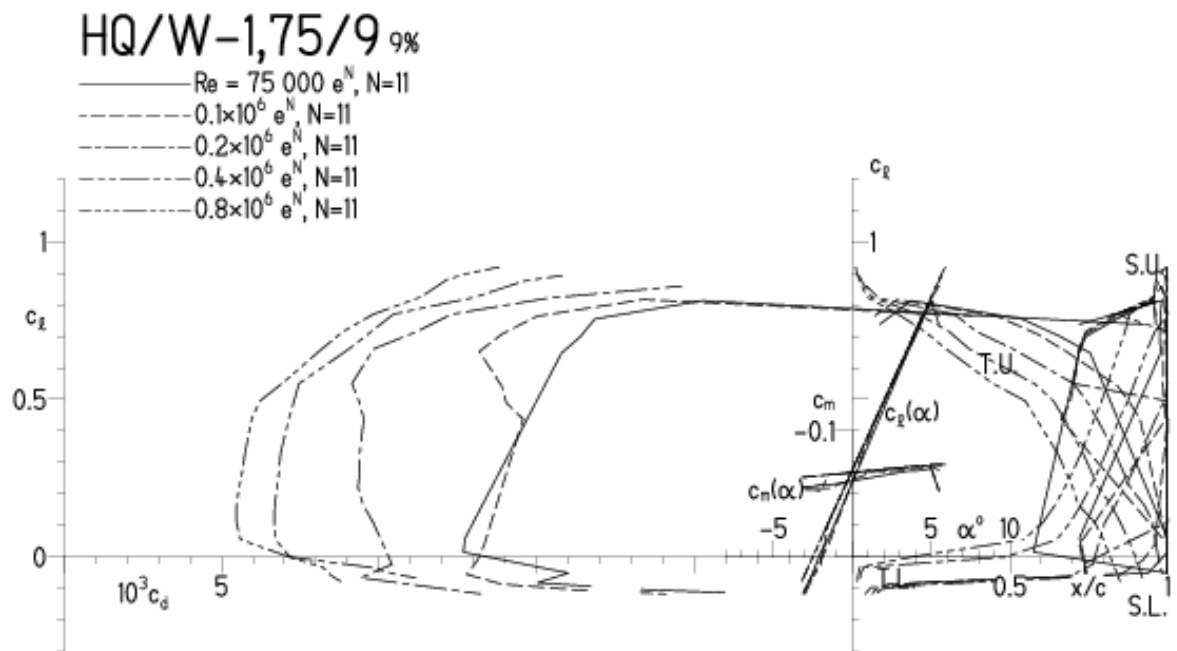


HQ/W-1,75/9, N=11

EPPLER 2005 V. 8.5.07 RUN 20.4.11 17:20

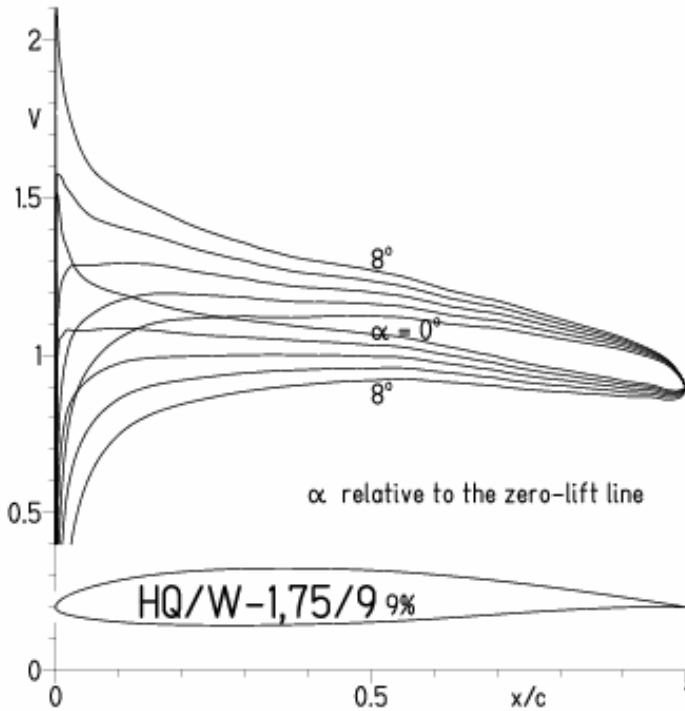


EPPLER 2005 V. 8.5.07 RUN 20.4.11 17:20

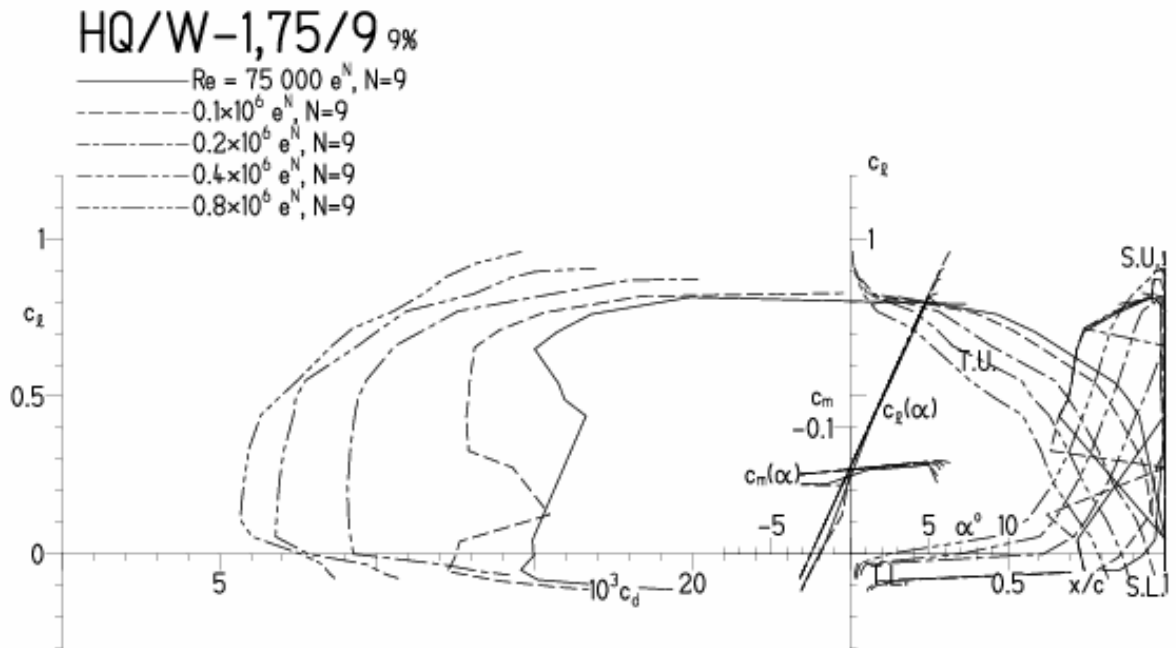


HQ/W-1,75/9, N=9

EPPLER 2005 V. 8.5.07 RUN 20.4.11 17:41

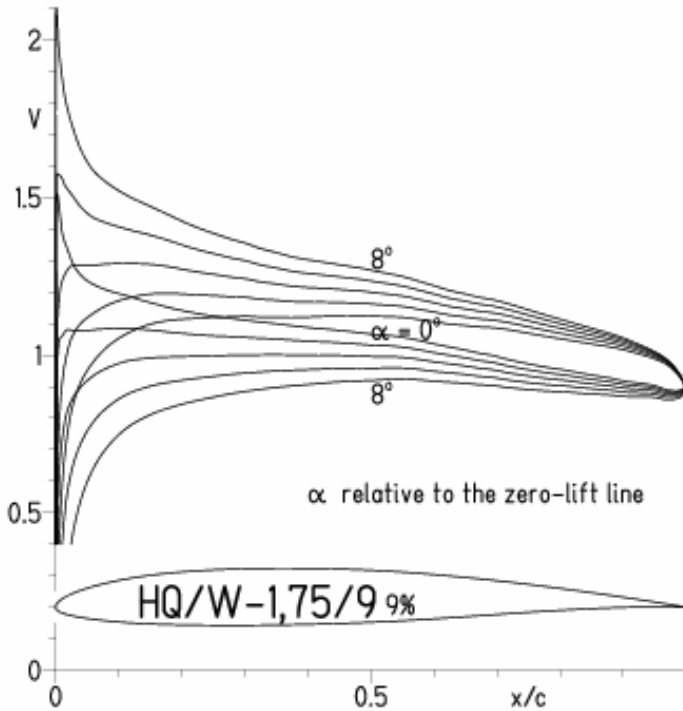


EPPLER 2005 V. 8.5.07 RUN 20.4.11 17:41



HQ/W-1,75/9, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

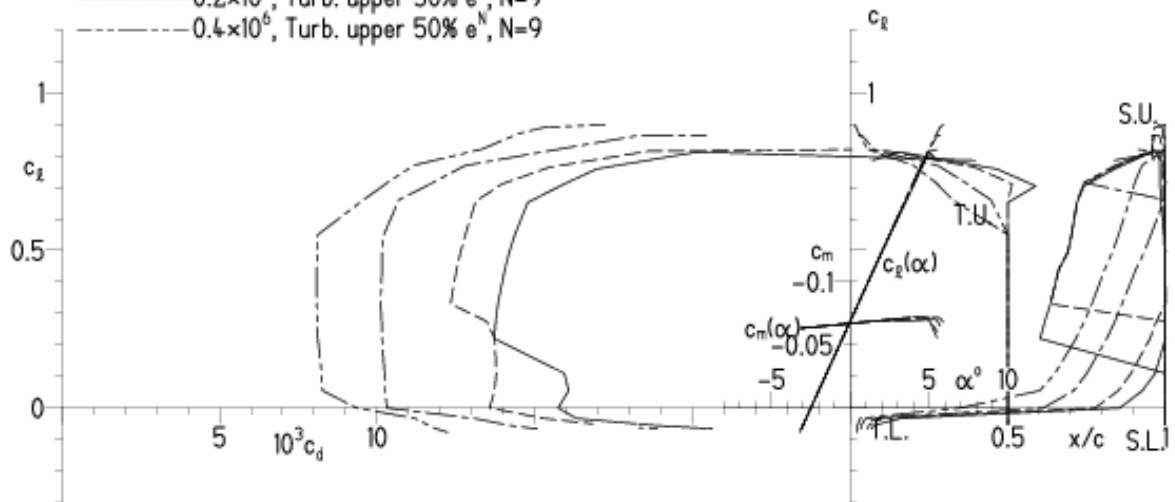
EPPLER 2005 V. 8.5.07 RUN 20.4.11 17:34



EPPLER 2005 V. 8.5.07 RUN 20.4.11 17:34

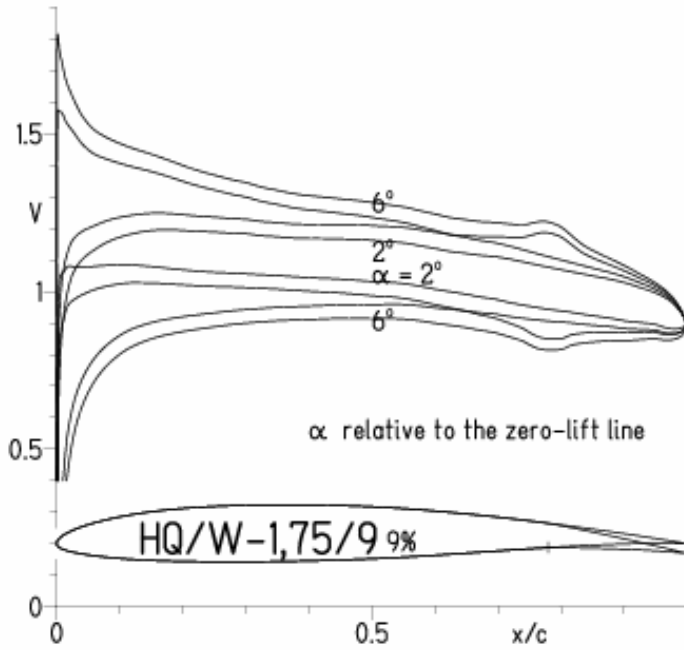
**HQ/W-1,75/9 9%**

- $Re = 75\,000$ , Turb. upper 50%  $e^N$ , N=9
- - -  $0.1 \times 10^6$ , Turb. upper 50%  $e^N$ , N=9
- · -  $0.2 \times 10^6$ , Turb. upper 50%  $e^N$ , N=9
- - -  $0.4 \times 10^6$ , Turb. upper 50%  $e^N$ , N=9



HQ/W-1,75/9, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 20.4.11 17:53

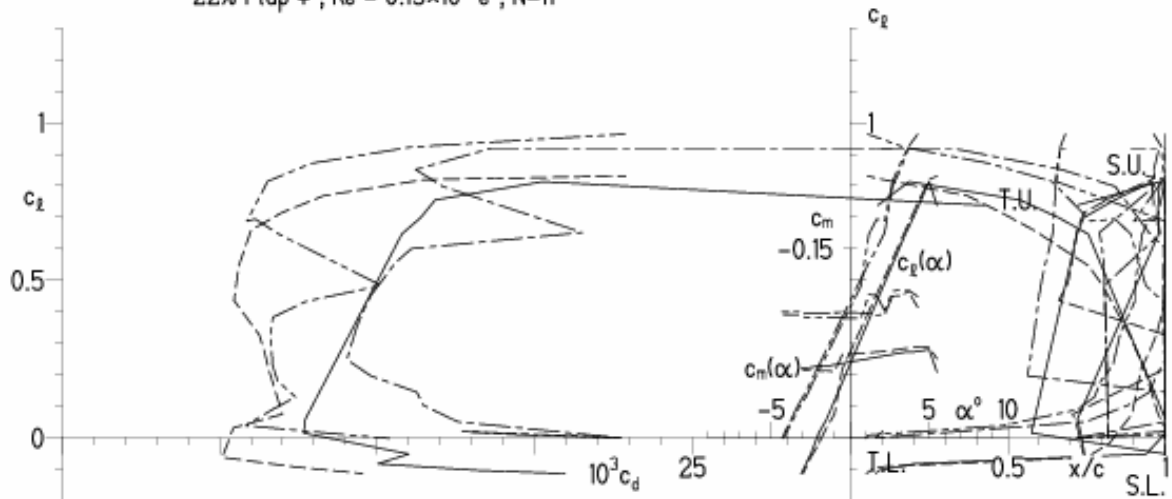


EPPLER 2005 V. 8.5.07 RUN 20.4.11 17:53

HQ/W-1,75/9 9%

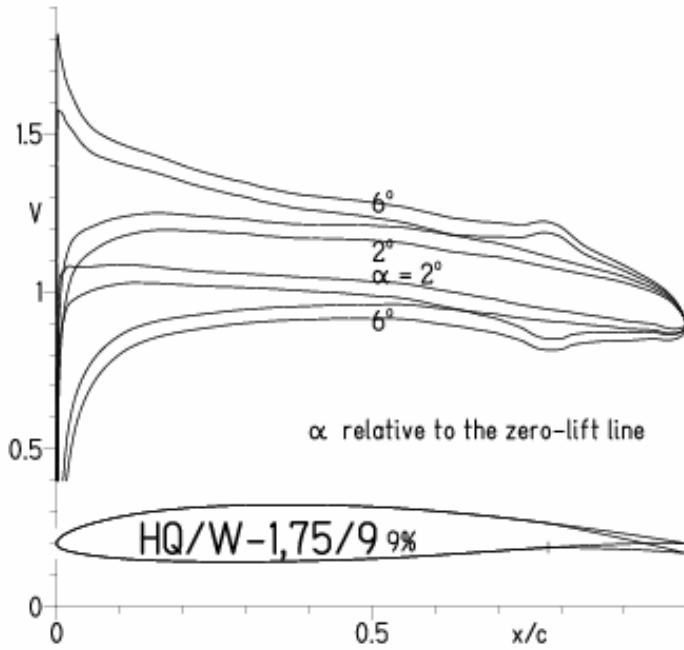
- $Re = 75\,000 e^N, N=11$
- - -  $0.15 \times 10^6 e^N, N=11$
- · - · 22% Flap  $4^\circ, Re = 75\,000 e^N, N=11$
- · - · 22% Flap  $4^\circ, Re = 0.15 \times 10^6 e^N, N=11$

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



HQ/W-1,75/9, N=9, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 20.4.11 18:04

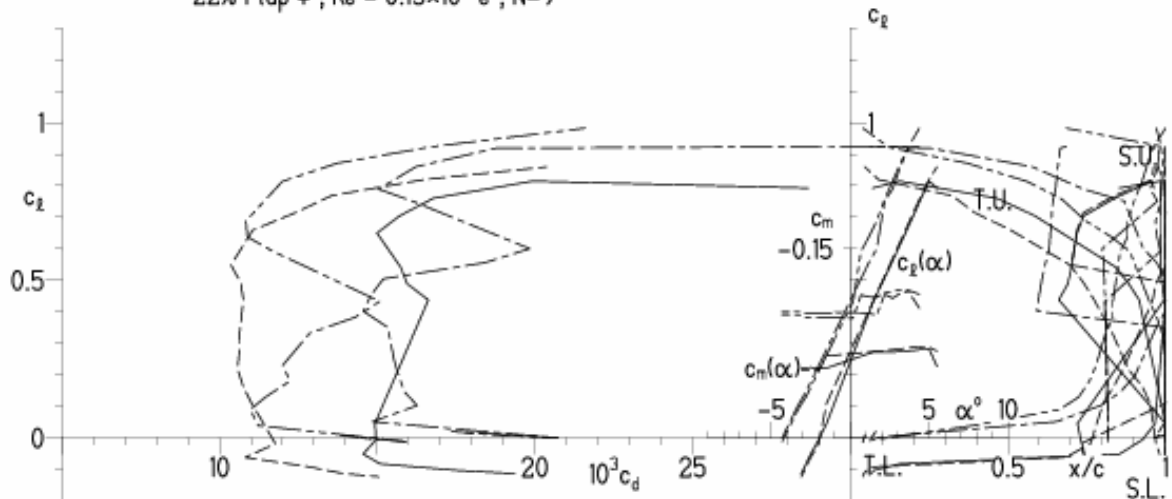


EPPLER 2005 V. 8.5.07 RUN 20.4.11 18:04

HQ/W-1,75/9 9%

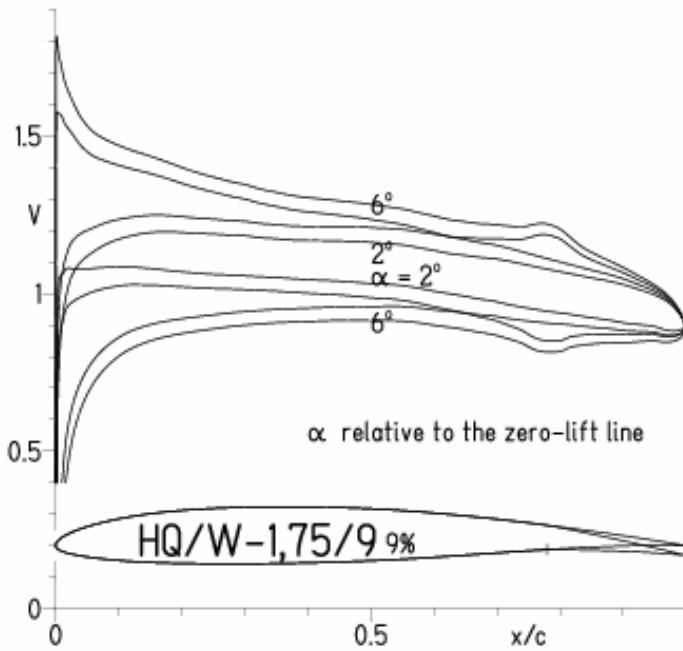
- $Re = 75\,000 e^N, N=9$
- - -  $0.15 \times 10^6 e^N, N=9$
- · - · 22% Flap  $4^\circ, Re = 75\,000 e^N, N=9$
- · - · 22% Flap  $4^\circ, Re = 0.15 \times 10^6 e^N, N=9$

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



HQ/W-1,75/9, N=9, mit +4° Wölbklappenausschlag, Turbulatoreffekt  
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 20.4.11 18:08

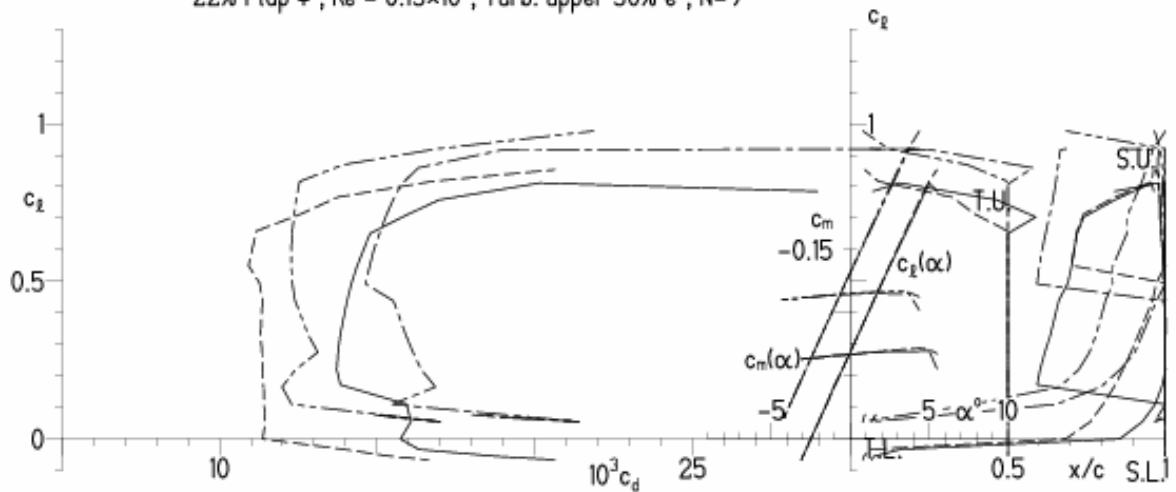


EPPLER 2005 V. 8.5.07 RUN 20.4.11 18:08

HQ/W-1,75/9 9%

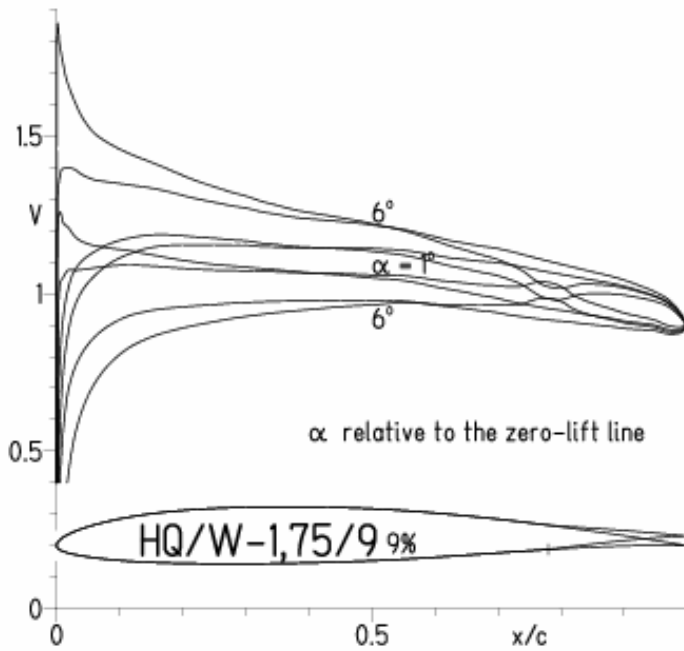
- Re = 75 000, Turb. upper 50% e<sup>N</sup>, N=9
- - - 0.15x10<sup>6</sup>, Turb. upper 50% e<sup>N</sup>, N=9
- · - 22% Flap 4°, Re = 75 000, Turb. upper 50% e<sup>N</sup>, N=9
- · - 22% Flap 4°, Re = 0.15x10<sup>6</sup>, Turb. upper 50% e<sup>N</sup>, N=9

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface

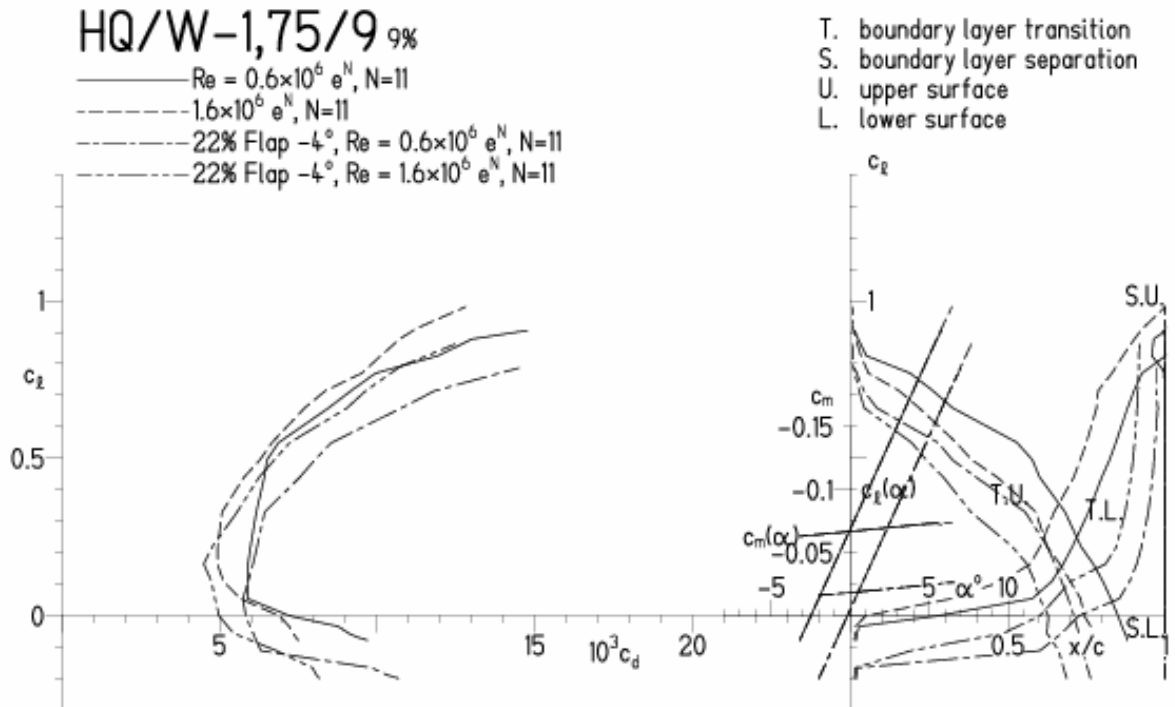


HQ/W-1,75/9, N=11, mit -4° Wölbklappenausschlag  
 (F3B/F3F-ähnliche Modelle mit 50 g/dm<sup>2</sup> erreichen damit gut über 300 km/h)

EPPLER 2005 V. 8.5.07 RUN 20.4.11 18:32

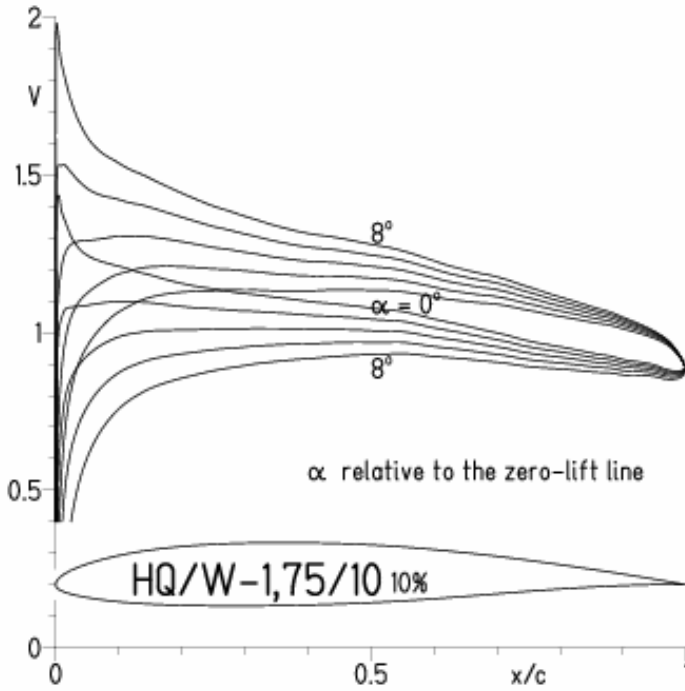


EPPLER 2005 V. 8.5.07 RUN 20.4.11 18:32



HQ/W-1,75/10, N=11

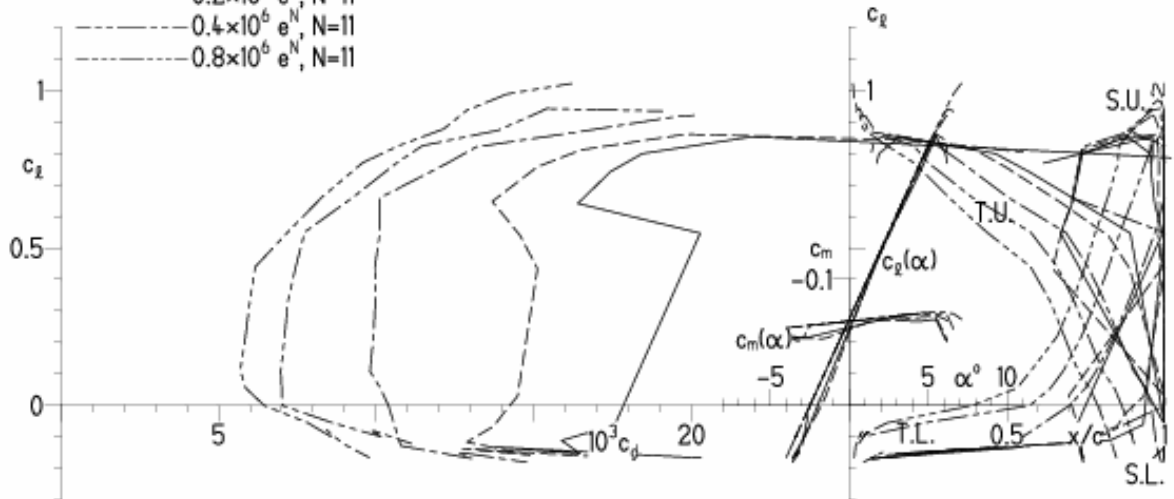
EPPLER 2005 V. 8.5.07 RUN 224.11 16:16



EPPLER 2005 V. 8.5.07 RUN 224.11 16:16

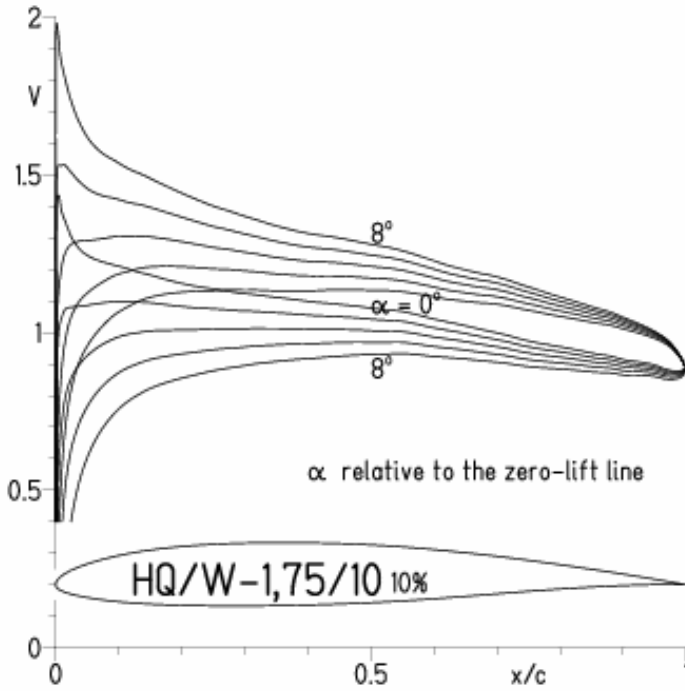
HQ/W-1,75/10 10%

- $Re = 75\,000 e^N, N=11$
- - -  $0.1 \times 10^6 e^N, N=11$
- · -  $0.2 \times 10^6 e^N, N=11$
- · · -  $0.4 \times 10^6 e^N, N=11$
- · · · -  $0.8 \times 10^6 e^N, N=11$



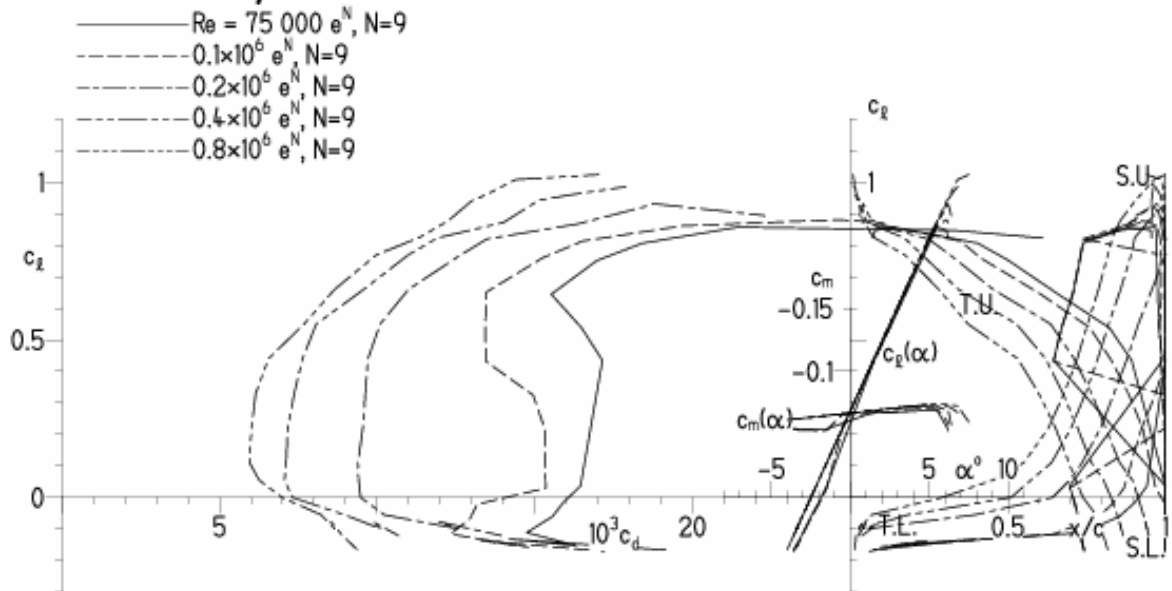
HQ/W-1,75/10, N=9

EPPLER 2005 V. 8.5.07 RUN 224.11 16:26



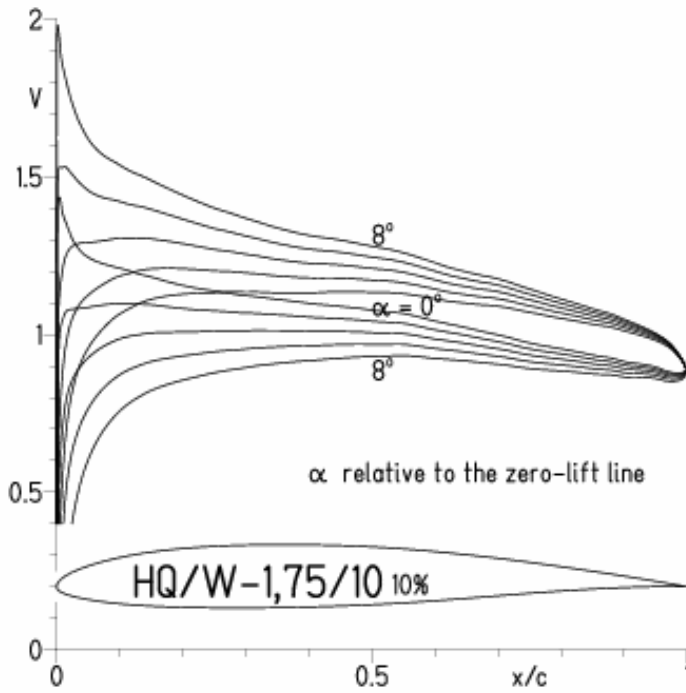
EPPLER 2005 V. 8.5.07 RUN 224.11 16:26

HQ/W-1,75/10 10%



HQ/W-1,75/10, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

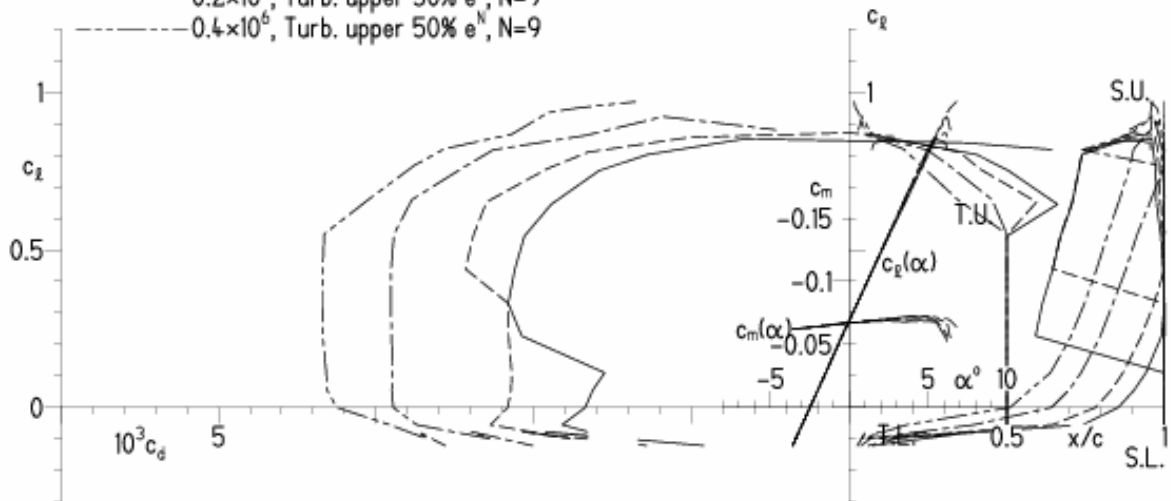
EPPLER 2005 V. 8.5.07 RUN 224.11 16:31



EPPLER 2005 V. 8.5.07 RUN 224.11 16:31

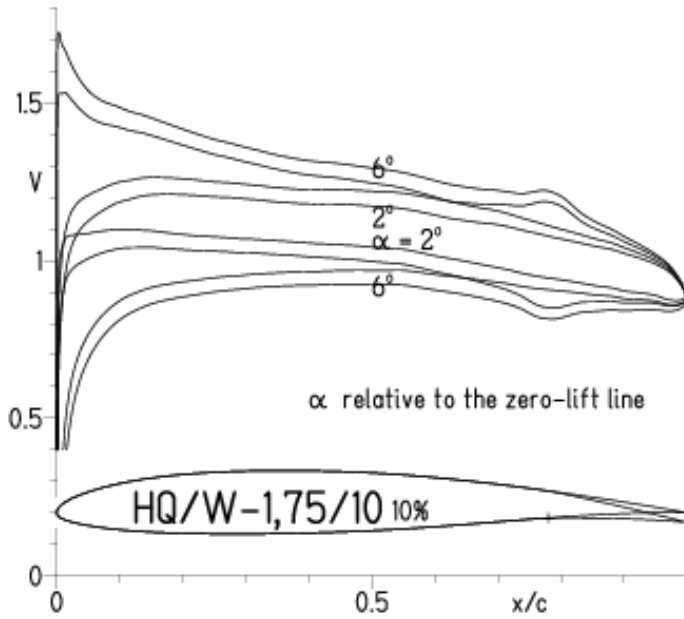
**HQ/W-1,75/10 10%**

- $Re = 75\ 000$ , Turb. upper 50%  $e^N$ ,  $N=9$
- - -  $0.1 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$
- · -  $0.2 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$
- - -  $0.4 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$



HQ/W-1,75/10, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 224.11 16:47

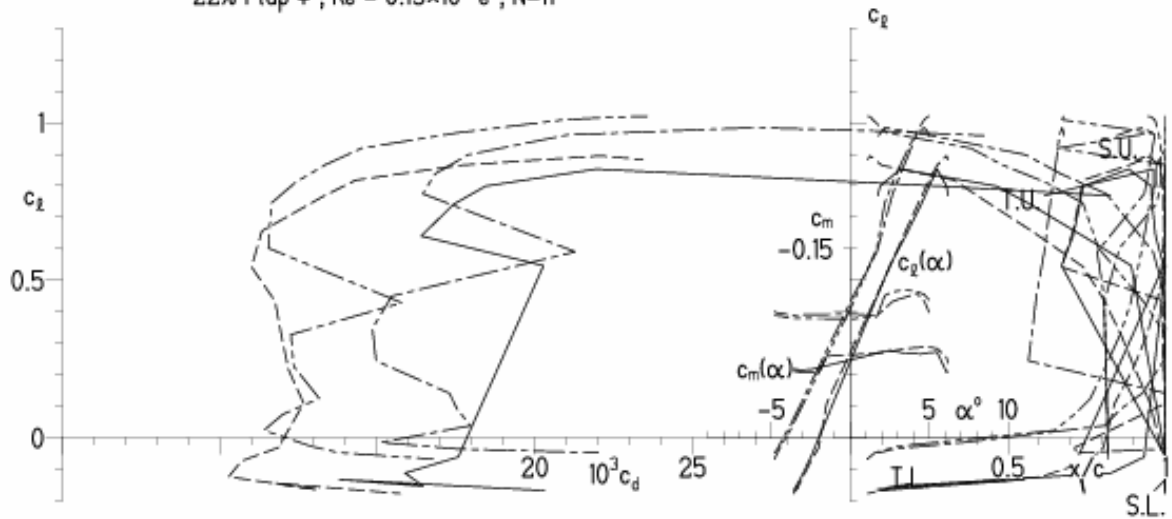


EPPLER 2005 V. 8.5.07 RUN 224.11 16:47

HQ/W-1,75/10 10%

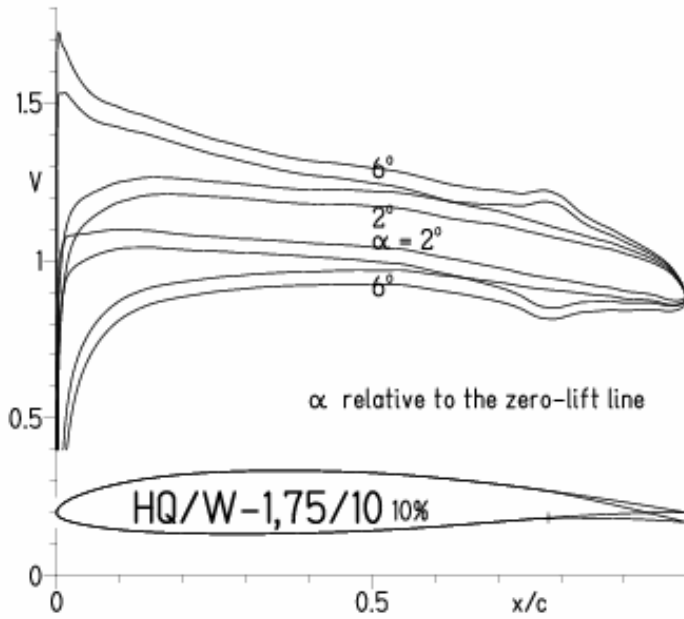
- $Re = 75\,000 e^N, N=11$
- - -  $0.15 \times 10^6 e^N, N=11$
- · - · 22% Flap  $4^\circ, Re = 75\,000 e^N, N=11$
- · - · 22% Flap  $4^\circ, Re = 0.15 \times 10^6 e^N, N=11$

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



HQ/W-1,75/10, N=9, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 224.11 16:56

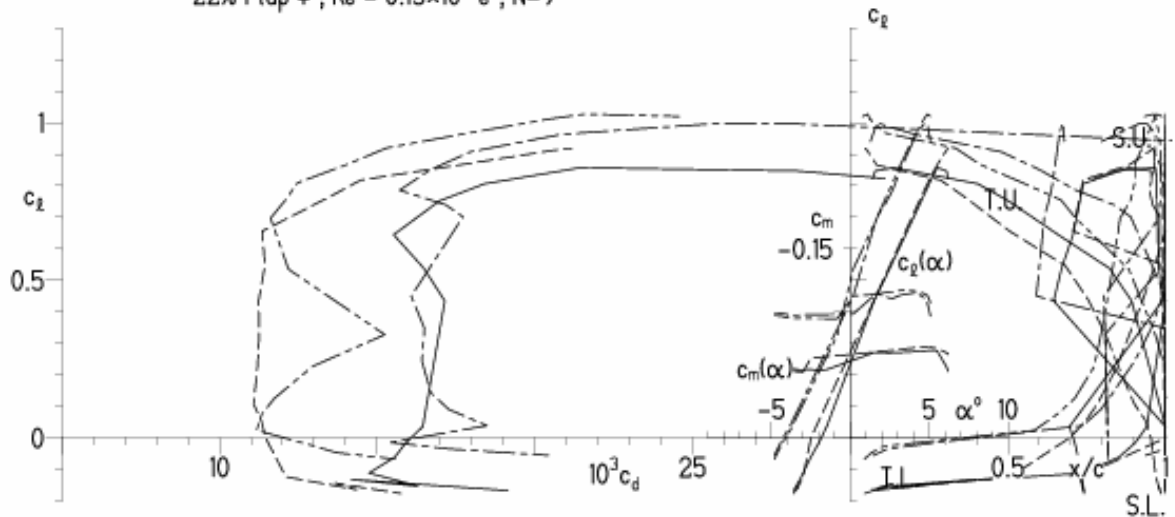


EPPLER 2005 V. 8.5.07 RUN 224.11 16:56

HQ/W-1,75/10 10%

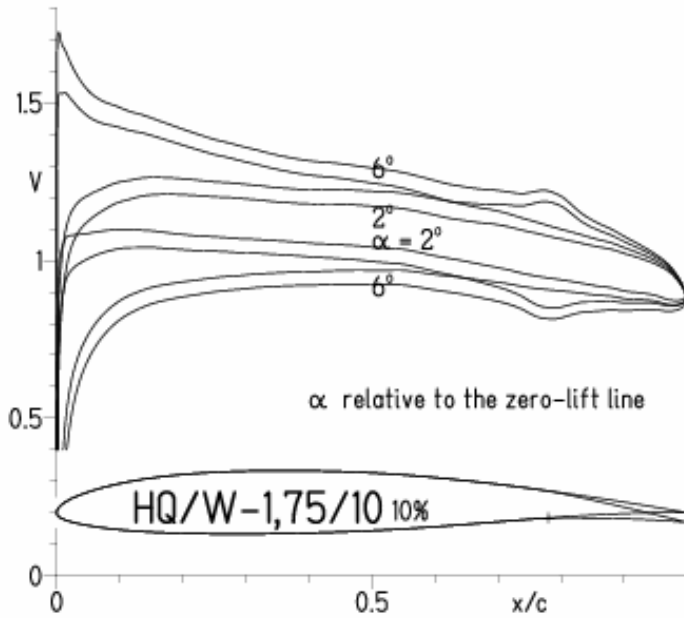
- $Re = 75\,000 e^N, N=9$
- - -  $0.15 \times 10^6 e^N, N=9$
- · - · 22% Flap  $4^\circ, Re = 75\,000 e^N, N=9$
- · - · 22% Flap  $4^\circ, Re = 0.15 \times 10^6 e^N, N=9$

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



**HQ/W-1,75/10, N=9, mit +4° Wölbklappenausschlag, Turbulatoreffekt**  
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 224.11 17:00

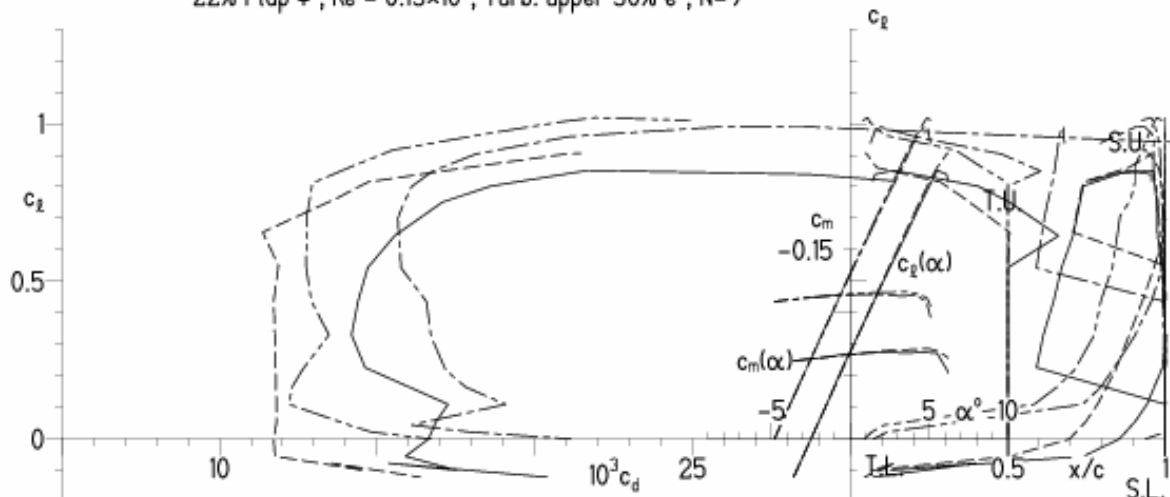


EPPLER 2005 V. 8.5.07 RUN 224.11 17:00

**HQ/W-1,75/10 10%**

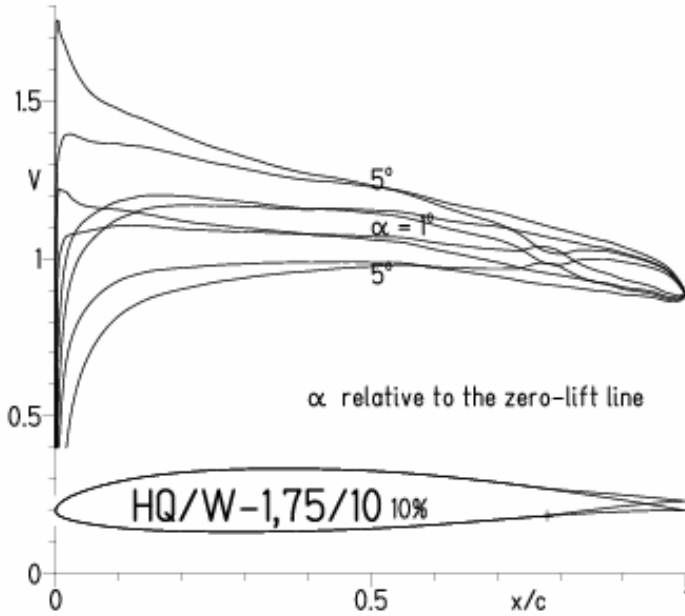
- $Re = 75\,000$ , Turb. upper 50%  $e^N$ ,  $N=9$
- - -  $0.15 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$
- · - 22% Flap  $4^\circ$ ,  $Re = 75\,000$ , Turb. upper 50%  $e^N$ ,  $N=9$
- · - 22% Flap  $4^\circ$ ,  $Re = 0.15 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface

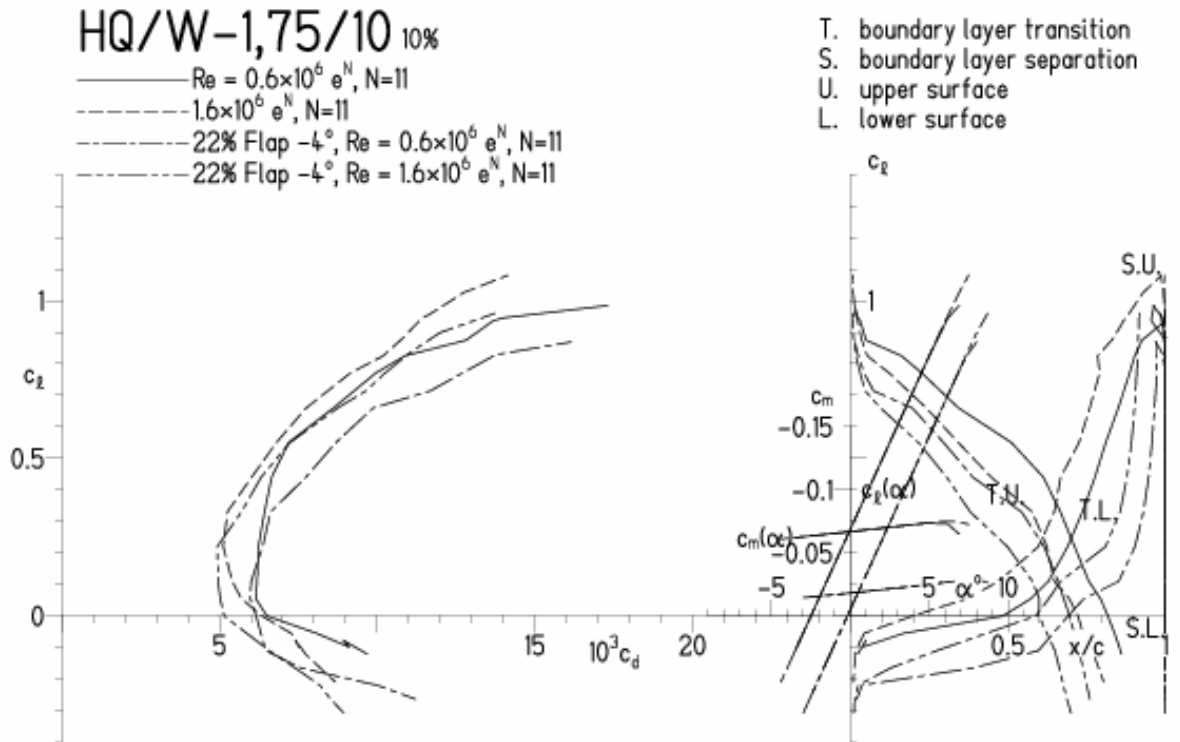


**HQ/W-1,75/10, N=11, mit -4° Wölbklappenausschlag**  
 (Segelmodelle mit > 50 g/dm<sup>2</sup> erreichen damit gut über 300 km/h Höchstgeschwindigkeit)

EPPLER 2005 V. 8.5.07 RUN 224.11 17:29

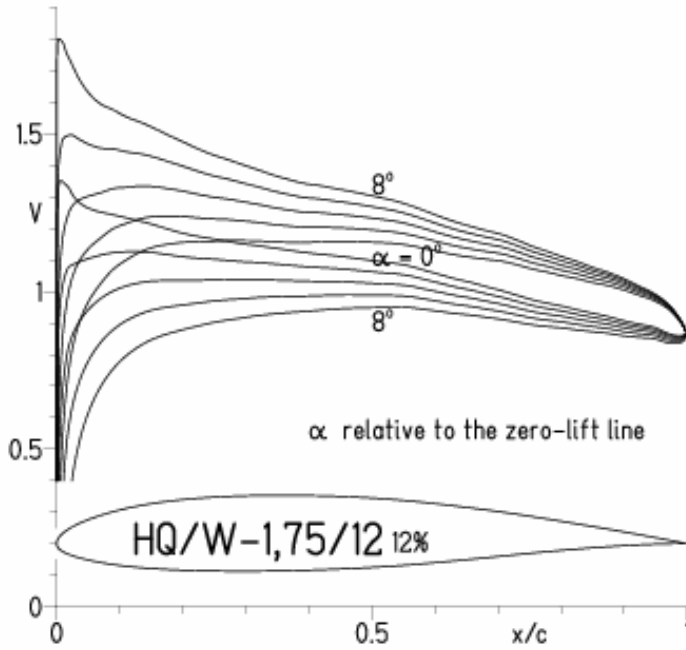


EPPLER 2005 V. 8.5.07 RUN 224.11 17:29

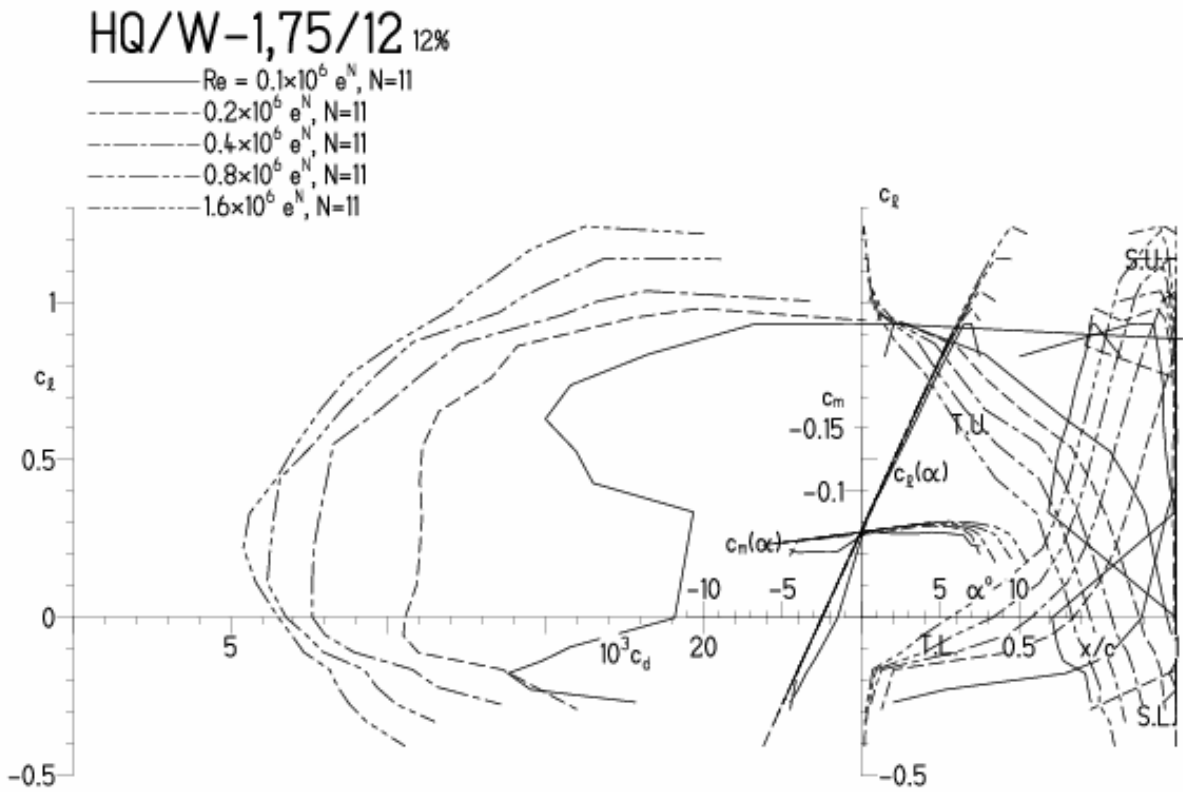


HQ/W-1,75/12, N=11

EPPLER 2005 V. 8.5.07 RUN 24.4.11 10:47

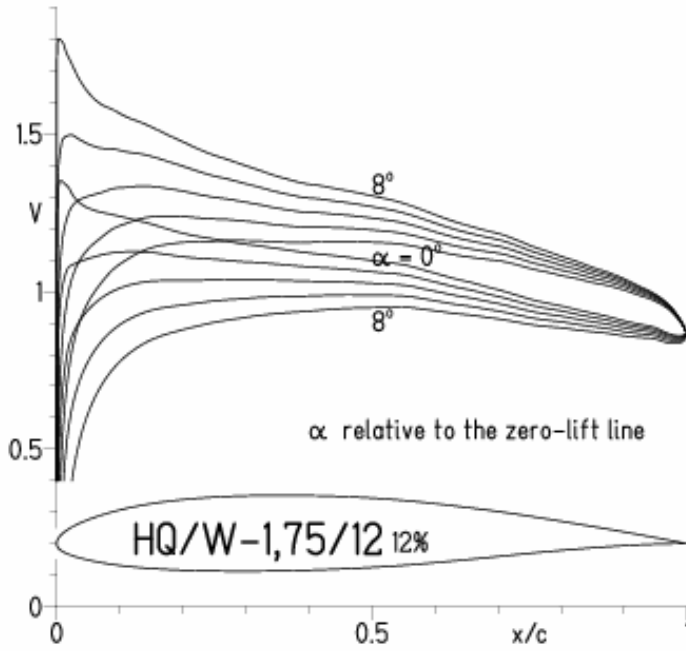


EPPLER 2005 V. 8.5.07 RUN 24.4.11 10:47

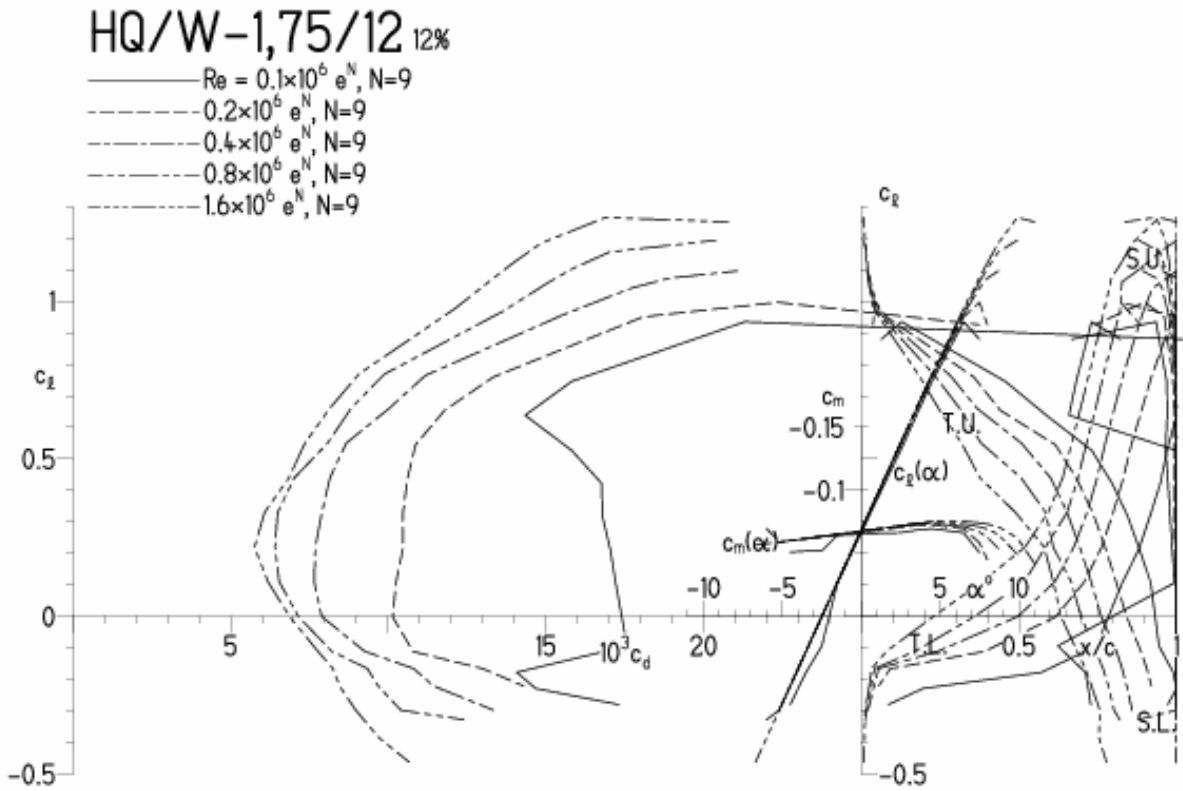


HQ/W-1,75/12, N=9

EPPLER 2005 V. 8.5.07 RUN 24.4.11 11:06

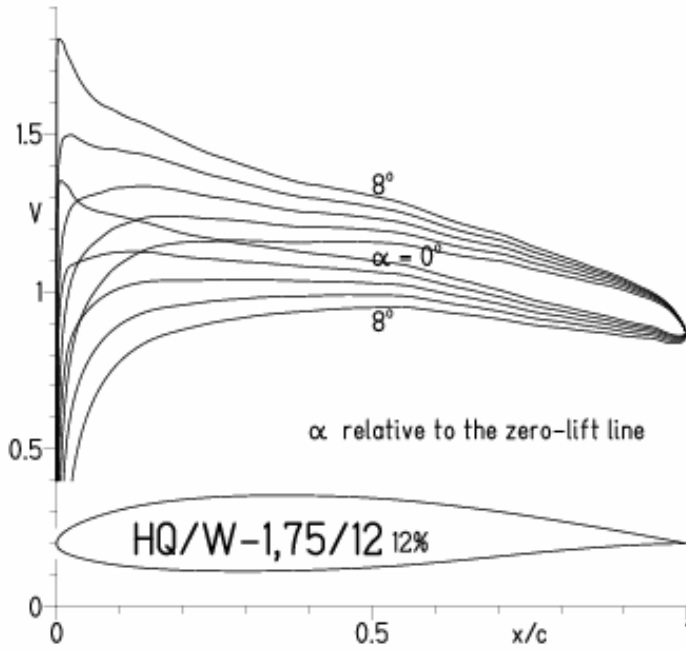


EPPLER 2005 V. 8.5.07 RUN 24.4.11 11:06



HQ/W-1,75/12, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

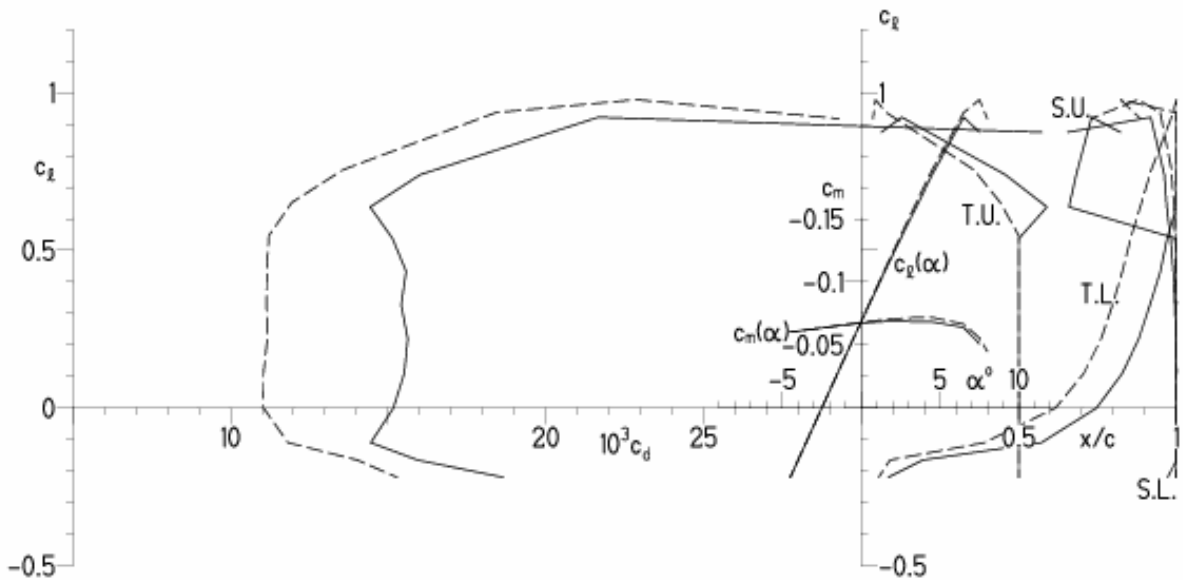
EPPLER 2005 V. 8.5.07 RUN 24.4.11 11:13



EPPLER 2005 V. 8.5.07 RUN 24.4.11 11:13

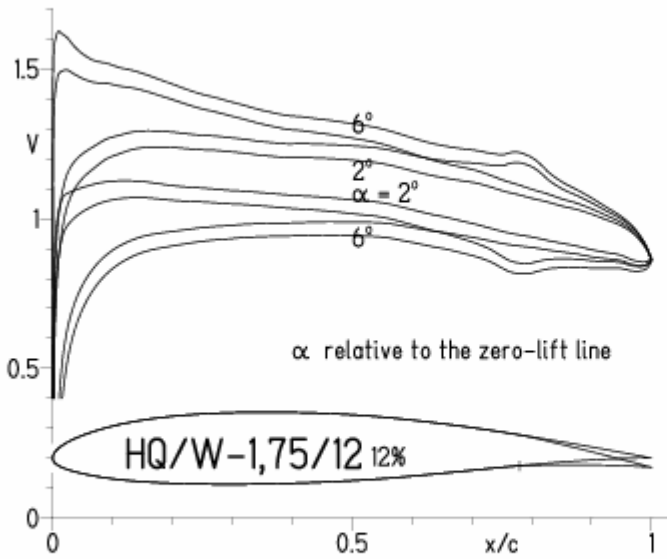
**HQ/W-1,75/12 12%**

- $Re = 0.1 \times 10^6$ , Turb. upper 50%  $e^N$ , N=9
- - -  $0.2 \times 10^6$ , Turb. upper 50%  $e^N$ , N=9



HQ/W-1,75/12, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 27.4.11 12:59

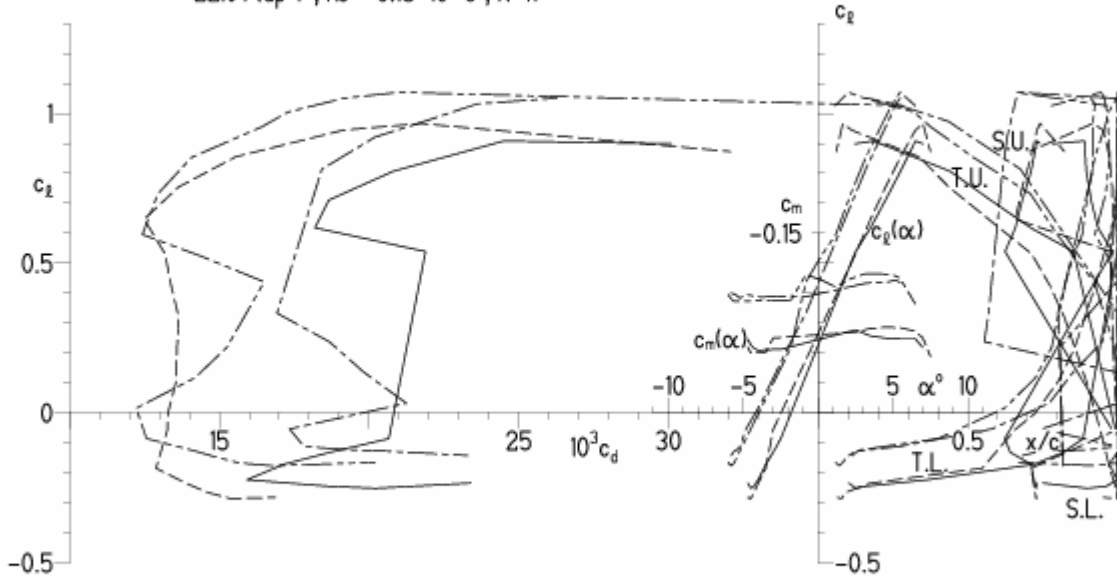


EPPLER 2005 V. 8.5.07 RUN 27.4.11 12:59

HQ/W-1,75/12 12%

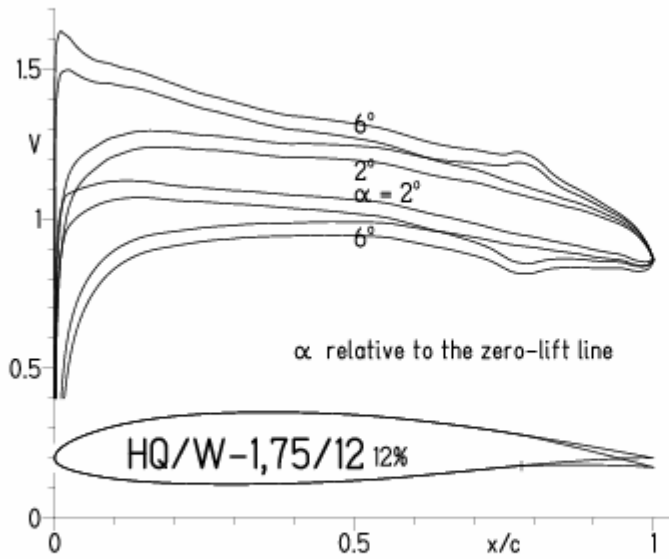
- $Re = 75\,000 e^N, N=11$
- - -  $0.15 \times 10^6 e^N, N=11$
- · - 22% Flap  $4^\circ, Re = 75\,000 e^N, N=11$
- · - 22% Flap  $4^\circ, Re = 0.15 \times 10^6 e^N, N=11$

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface

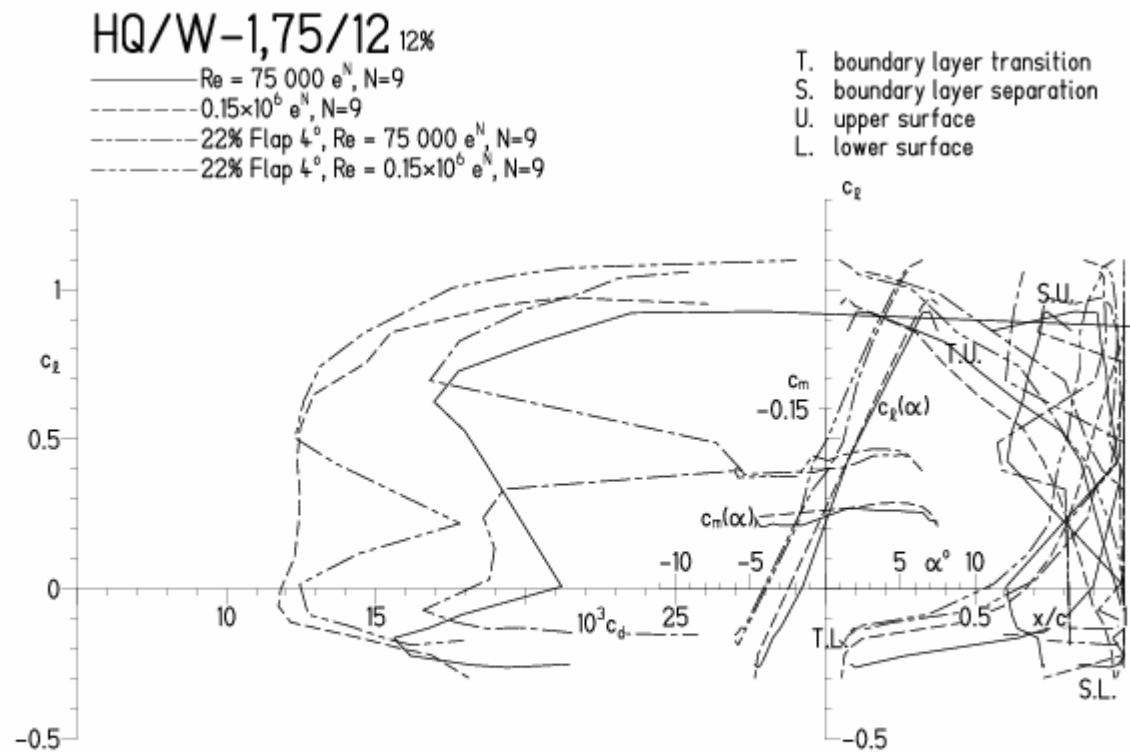


HQ/W-1,75/12, N=9, mit +4° Wöbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 27.4.11 13:02

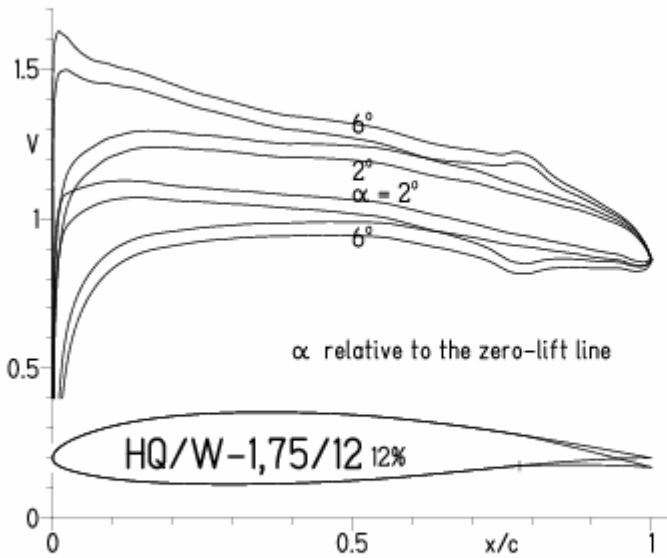


EPPLER 2005 V. 8.5.07 RUN 27.4.11 13:02



HQ/W-1,75/12, N=9, mit +4° Wölbklappenausschlag, Turbulatoreffekt  
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 274.11 13:05

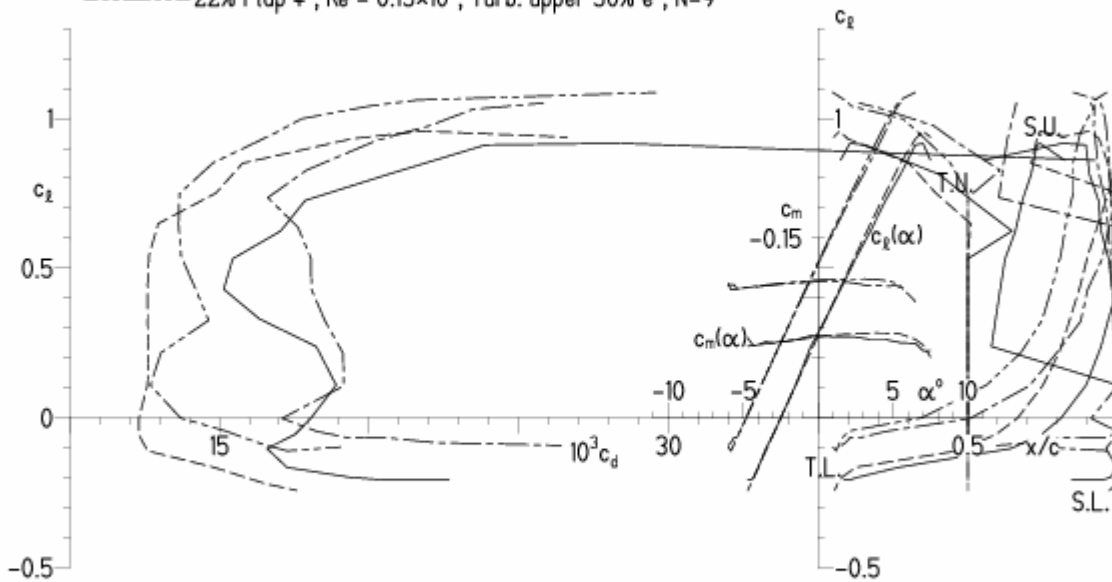


EPPLER 2005 V. 8.5.07 RUN 274.11 13:05

HQ/W-1,75/12 12%

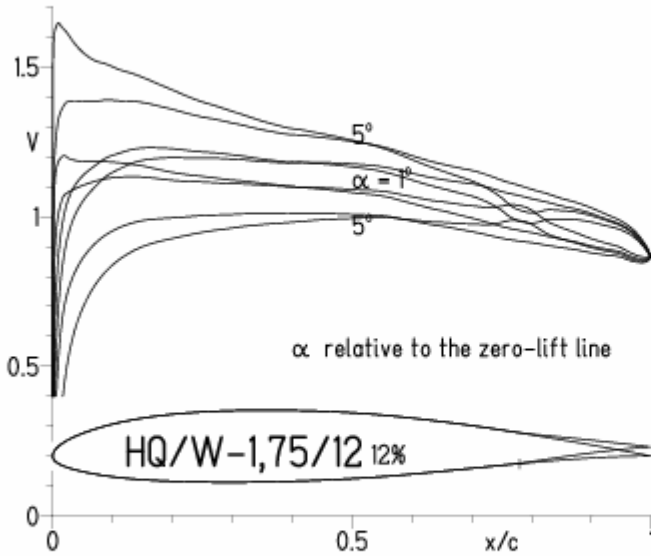
- Re = 75 000, Turb. upper 50% e<sup>N</sup>, N=9
- - - 0.15×10<sup>6</sup>, Turb. upper 50% e<sup>N</sup>, N=9
- 22% Flap 4°, Re = 75 000, Turb. upper 50% e<sup>N</sup>, N=9
- - - 22% Flap 4°, Re = 0.15×10<sup>6</sup>, Turb. upper 50% e<sup>N</sup>, N=9

- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface

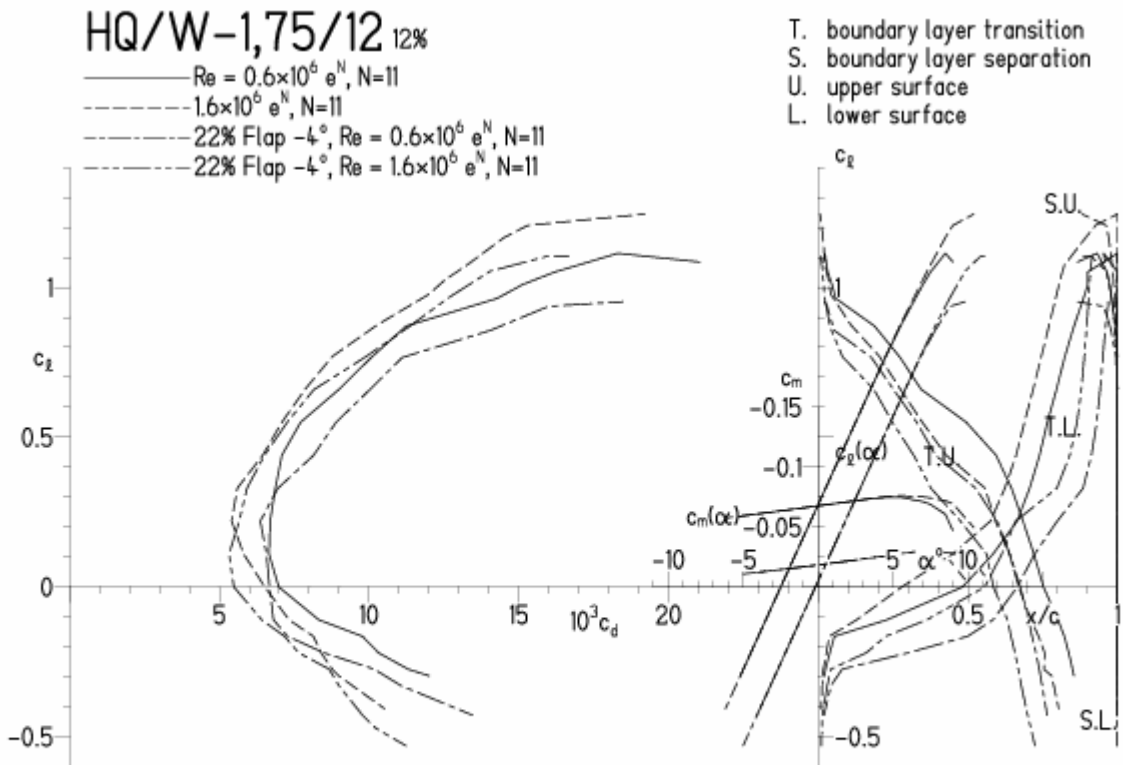


HQ/W-1,75/14, N=11, mit -4° Wölbklappenausschlag  
 (Segelmodelle erreichen damit hohe Endgeschwindigkeiten)

EPPLER 2005 V. 8.5.07 RUN 27.4.11 12:33

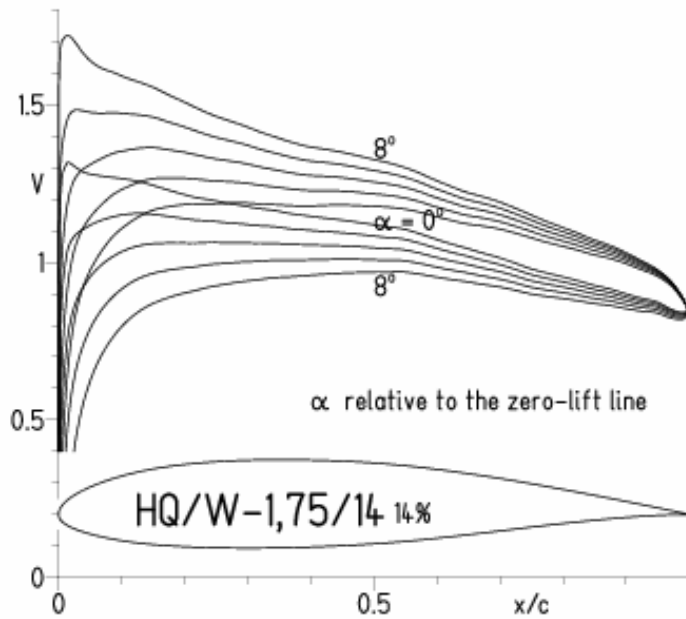


EPPLER 2005 V. 8.5.07 RUN 27.4.11 12:33



HQ/W-1,75/14, N=11

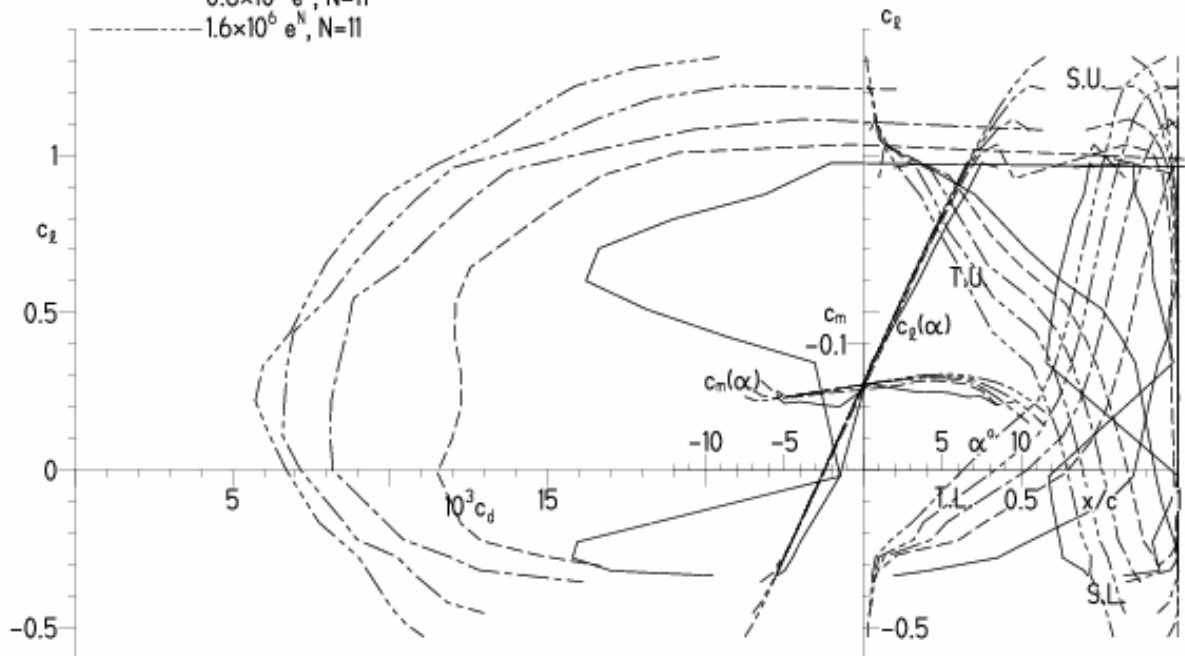
EPPLER 2005 V. 8.5.07 RUN 24.4.11 11:30



EPPLER 2005 V. 8.5.07 RUN 24.4.11 11:30

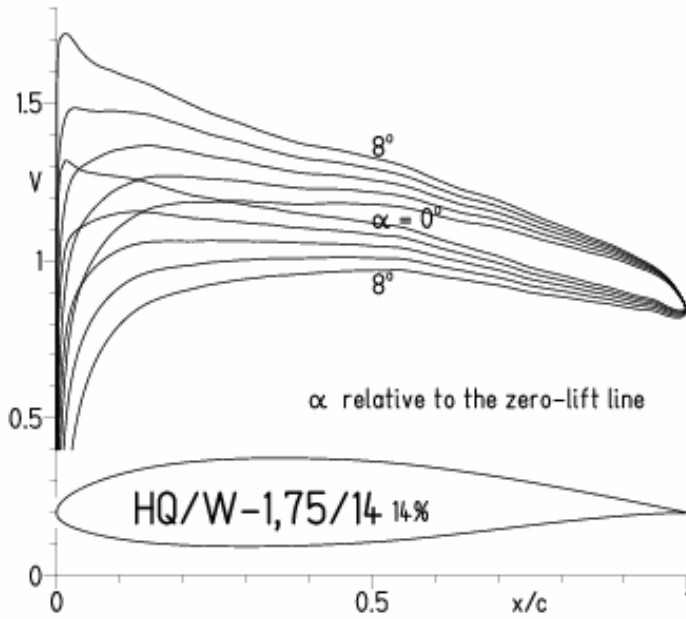
HQ/W-1,75/14 14%

- $Re = 0.1 \times 10^6 e^N, N=11$
- - -  $0.2 \times 10^6 e^N, N=11$
- · -  $0.4 \times 10^6 e^N, N=11$
- · · -  $0.8 \times 10^6 e^N, N=11$
- · · · -  $1.6 \times 10^6 e^N, N=11$

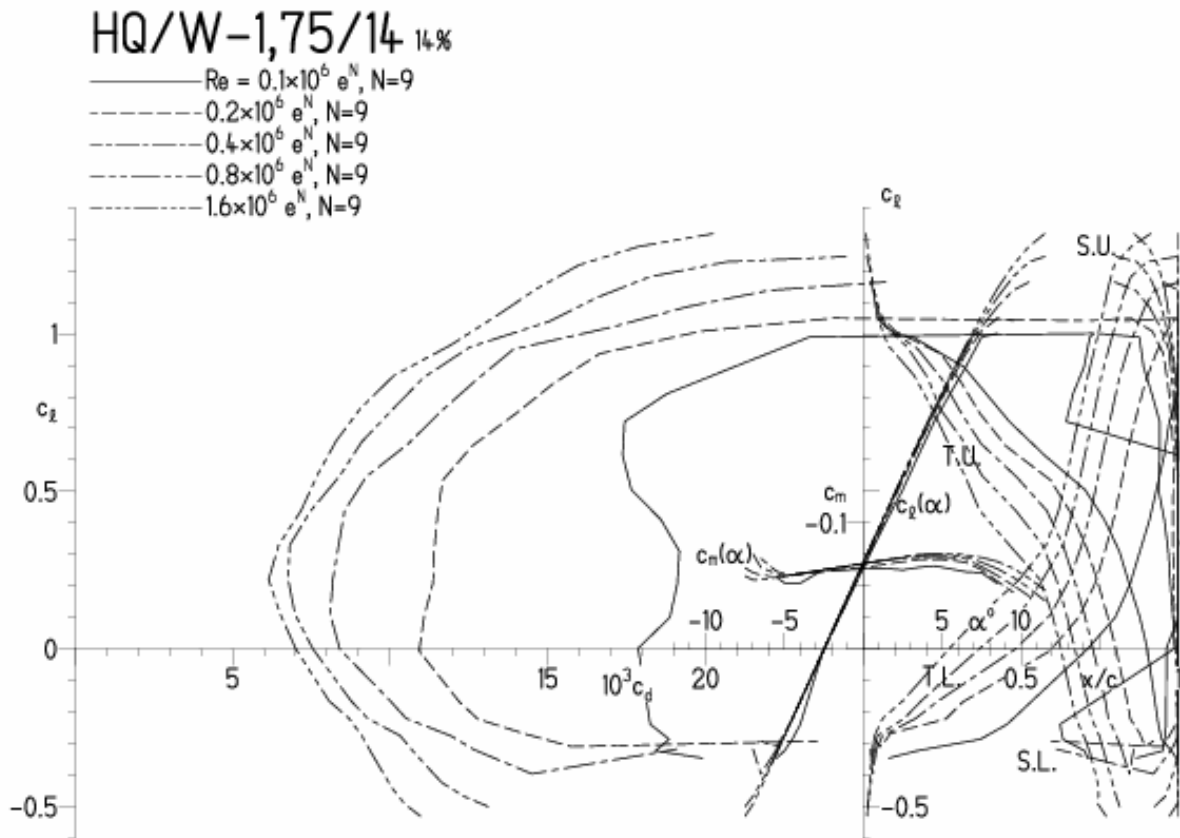


HQ/W-1,75/14, N=9

EPPLER 2005 V. 8.5.07 RUN 24.4.11 11:35

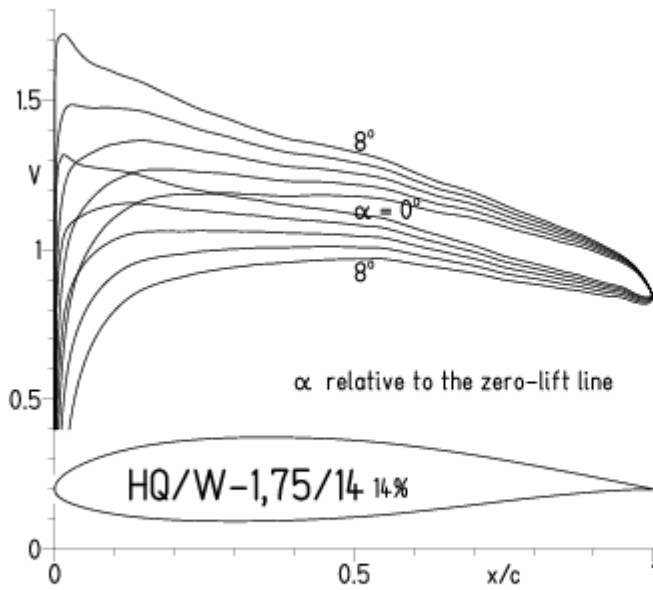


EPPLER 2005 V. 8.5.07 RUN 24.4.11 11:35



HQ/W-1,75/14, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

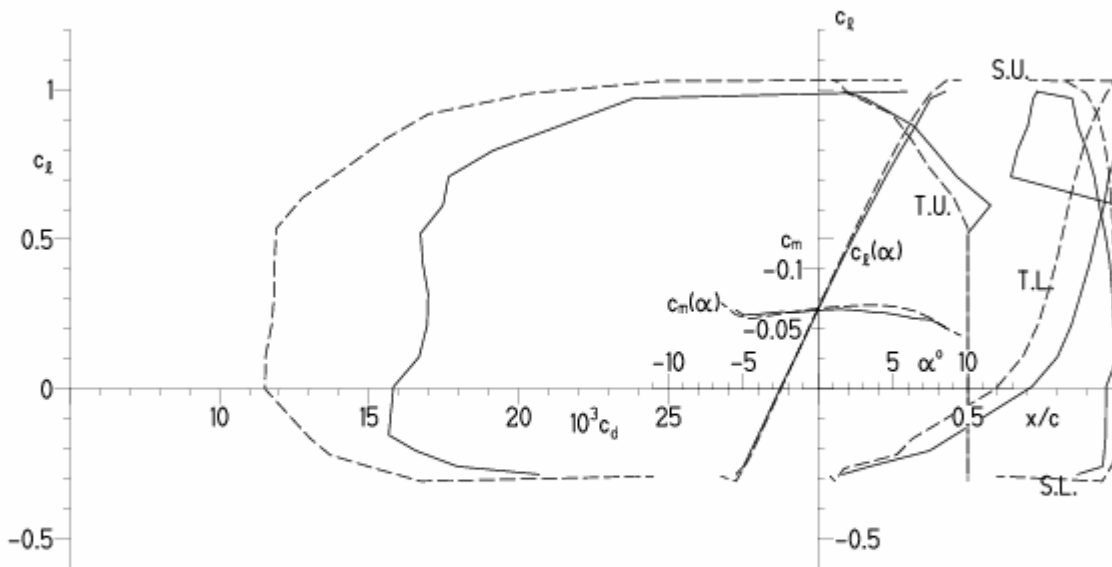
EPPLER 2005 V. 8.5.07 RUN 24.4.11 10:40



EPPLER 2005 V. 8.5.07 RUN 24.4.11 10:40

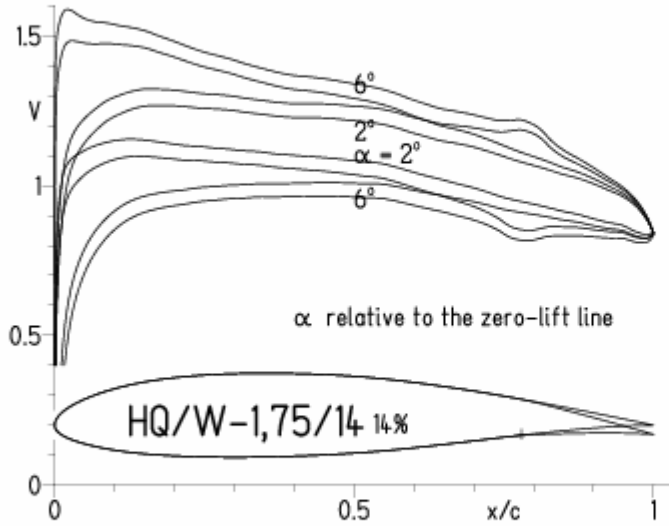
**HQ/W-1,75/14 14%**

- $Re = 0.1 \times 10^6$ , Turb. upper 50%  $e^N$ , N=9
- - -  $0.2 \times 10^6$ , Turb. upper 50%  $e^N$ , N=9



HQ/W-1,75/14, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 274.11 11:10

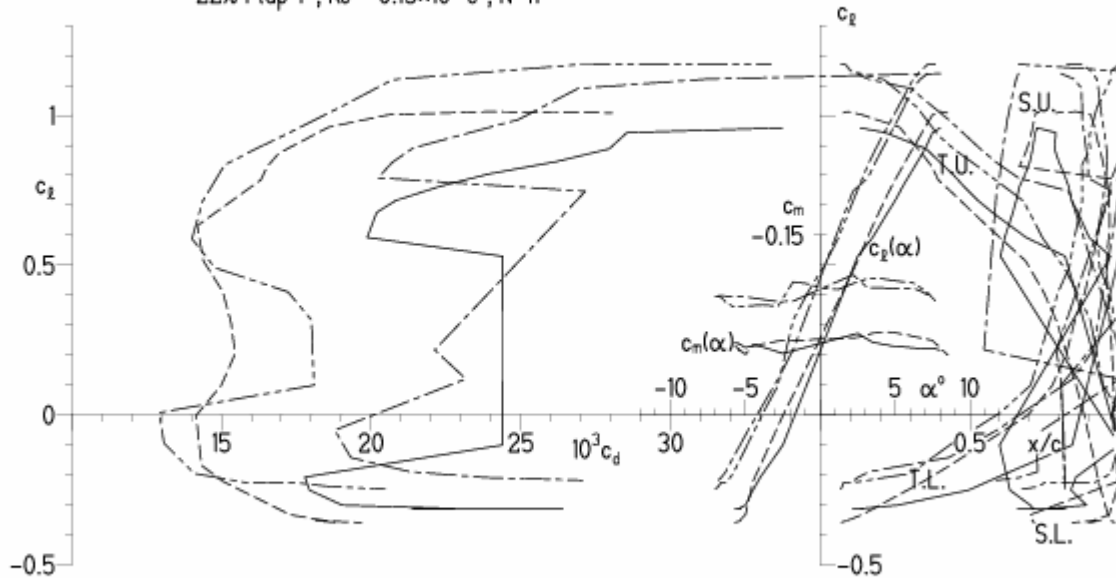


EPPLER 2005 V. 8.5.07 RUN 274.11 11:10

HQ/W-1,75/14 14%

- Re = 75 000 e<sup>N</sup>, N=11
- - - 0.15 × 10<sup>6</sup> e<sup>N</sup>, N=11
- · - 22% Flap 4°, Re = 75 000 e<sup>N</sup>, N=11
- · - 22% Flap 4°, Re = 0.15 × 10<sup>6</sup> e<sup>N</sup>, N=11

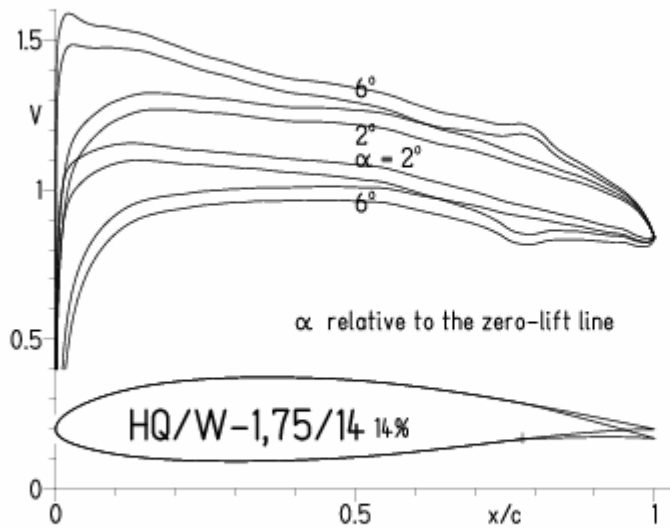
- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



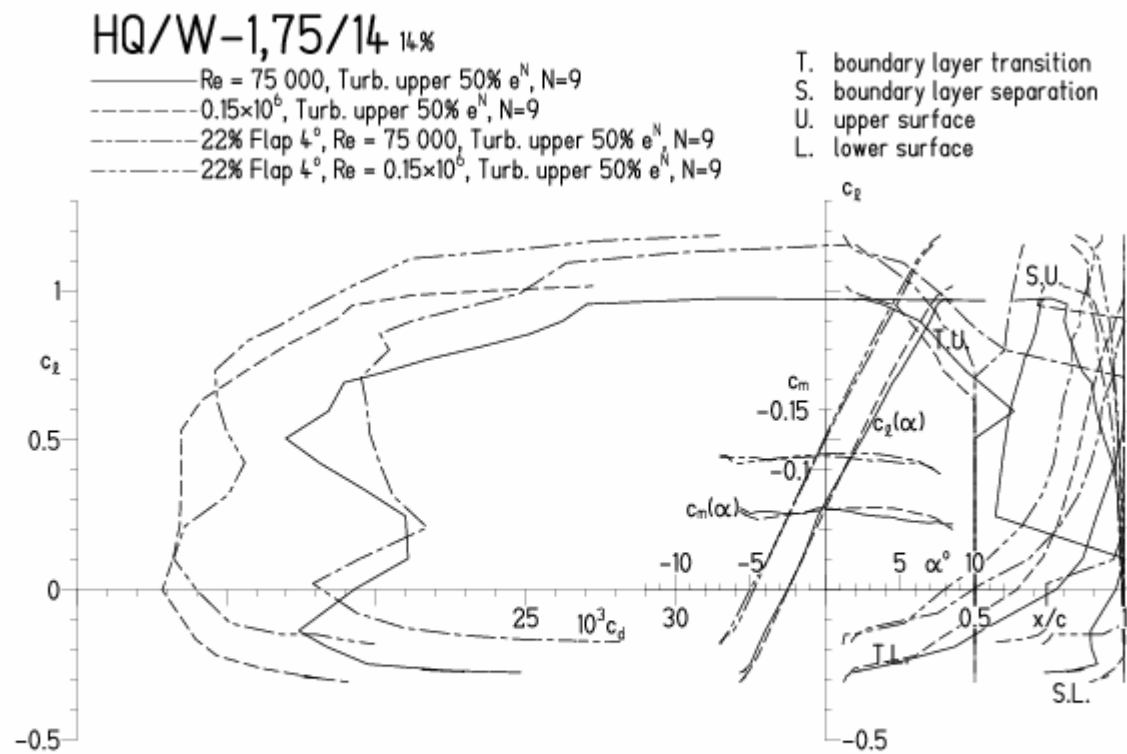


HQ/W-1,75/14, N=9, mit +4° Wölbklappenausschlag, Turbulatoreffekt  
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 27.4.11 11:19

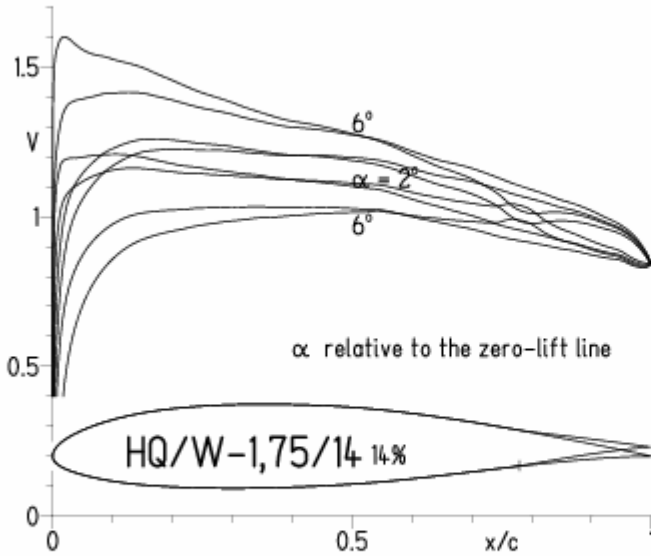


EPPLER 2005 V. 8.5.07 RUN 27.4.11 11:19



HQ/W-1,75/14, N=11, mit -4° Wölbklappenausschlag  
 (Segelmodelle erreichen damit hohe Endgeschwindigkeiten)

EPPLER 2005 V. 8.5.07 RUN 27.4.11 11:51



EPPLER 2005 V. 8.5.07 RUN 27.4.11 11:51

