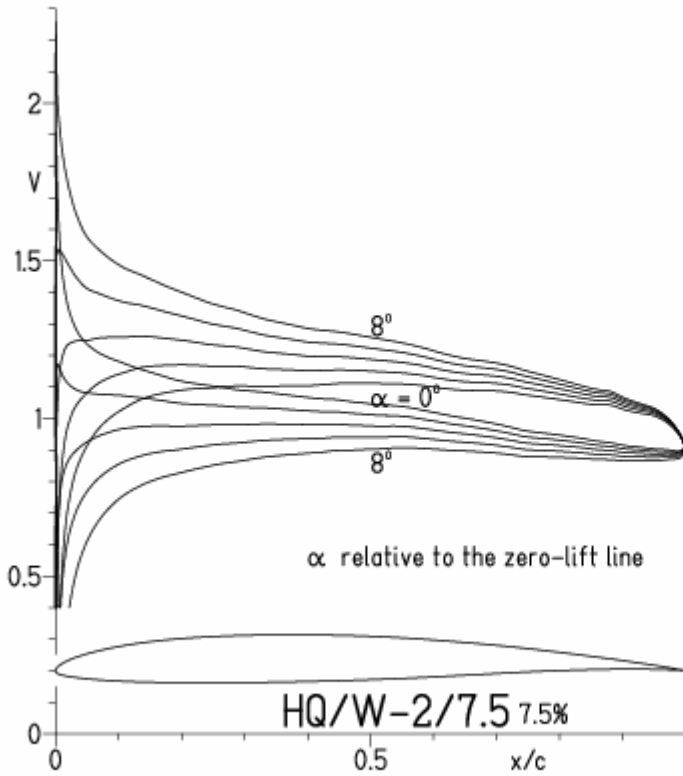


HQ/W-2/7,5, N=11

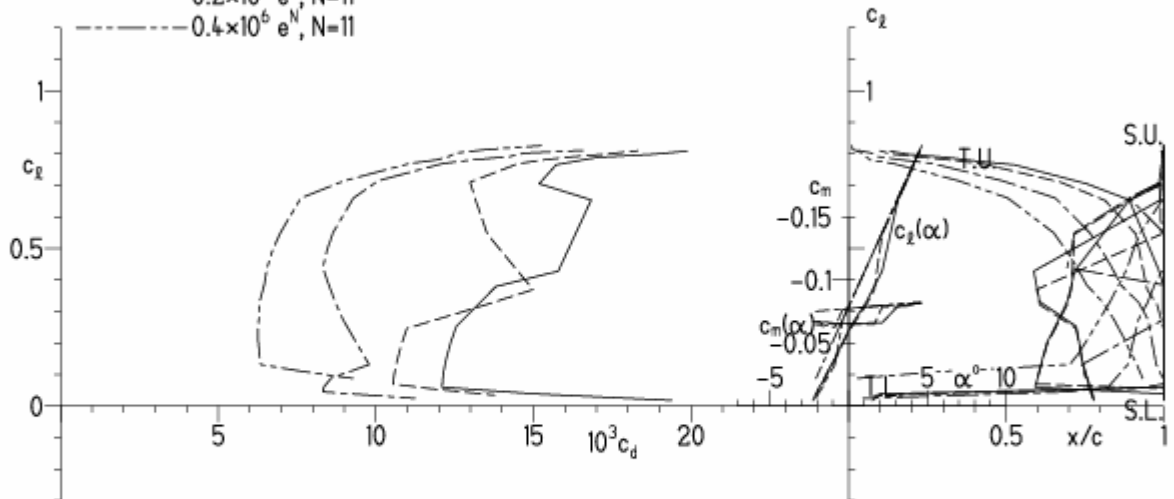
EPPLER 2005 V. 8.5.07 RUN 6.4.11 10:45



EPPLER 2005 V. 8.5.07 RUN 6.4.11 10:45

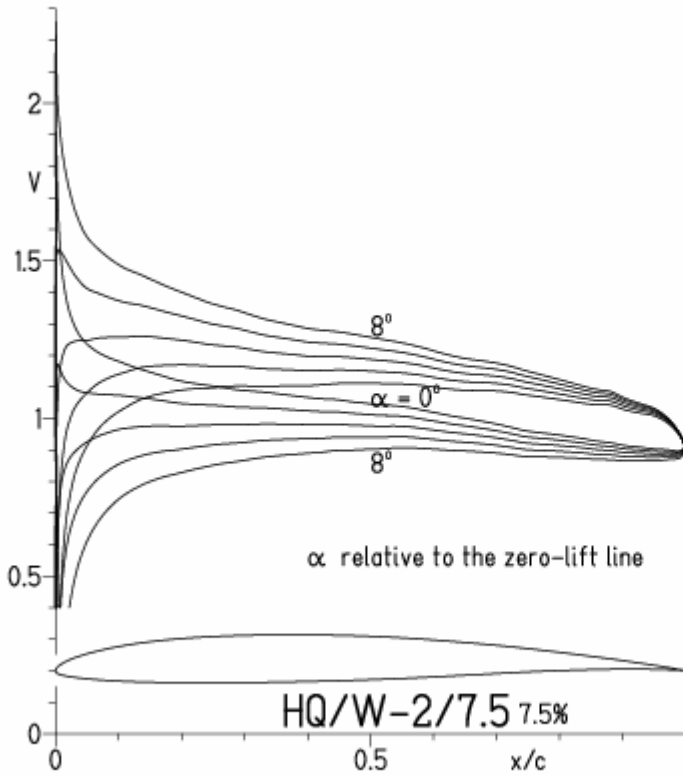
HQ/W-2/7.5 7.5%

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



HQ/W-2/7.5, N=9

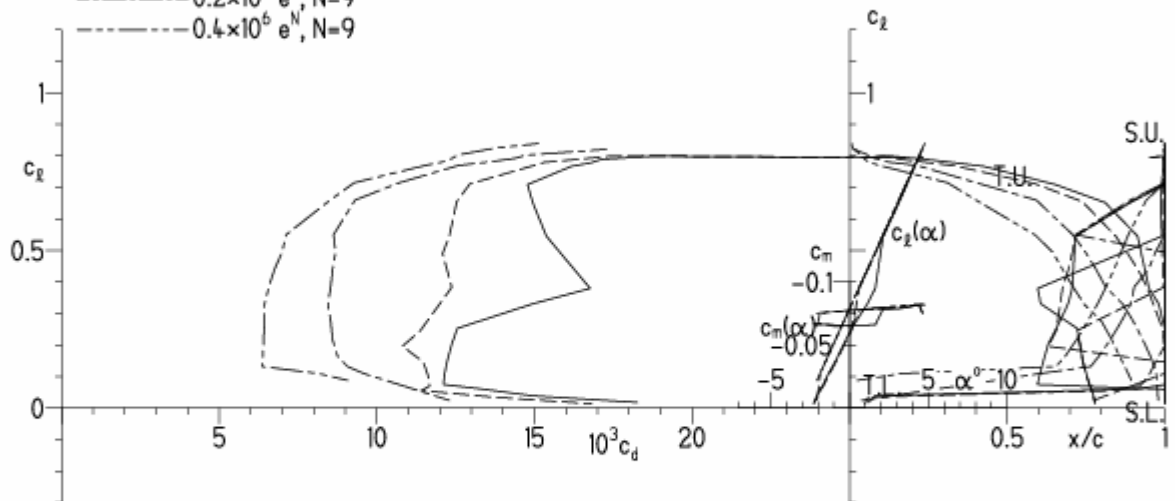
EPPLER 2005 V. 8.5.07 RUN 6.4.11 10:58



EPPLER 2005 V. 8.5.07 RUN 6.4.11 10:5

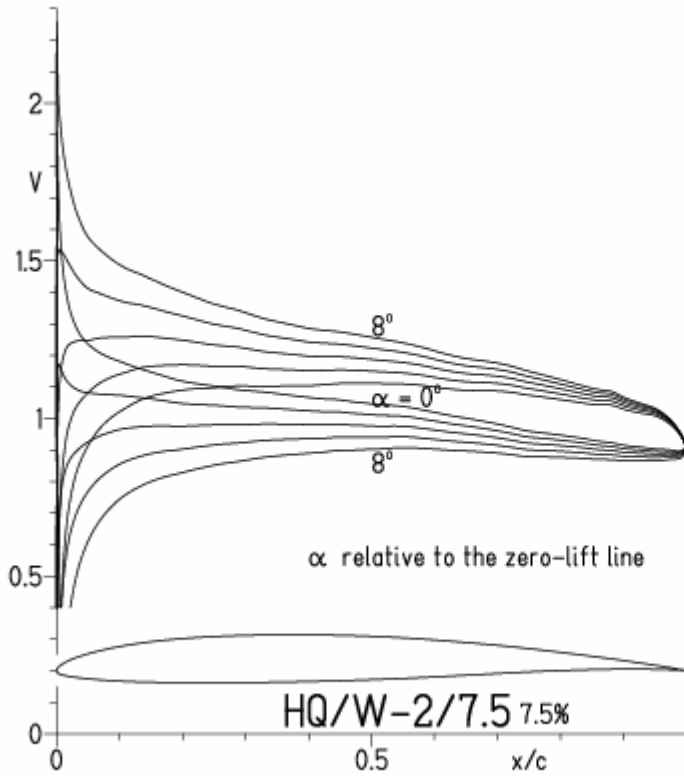
HQ/W-2/7.5 7.5%

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



HQ/W-2/7,5, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

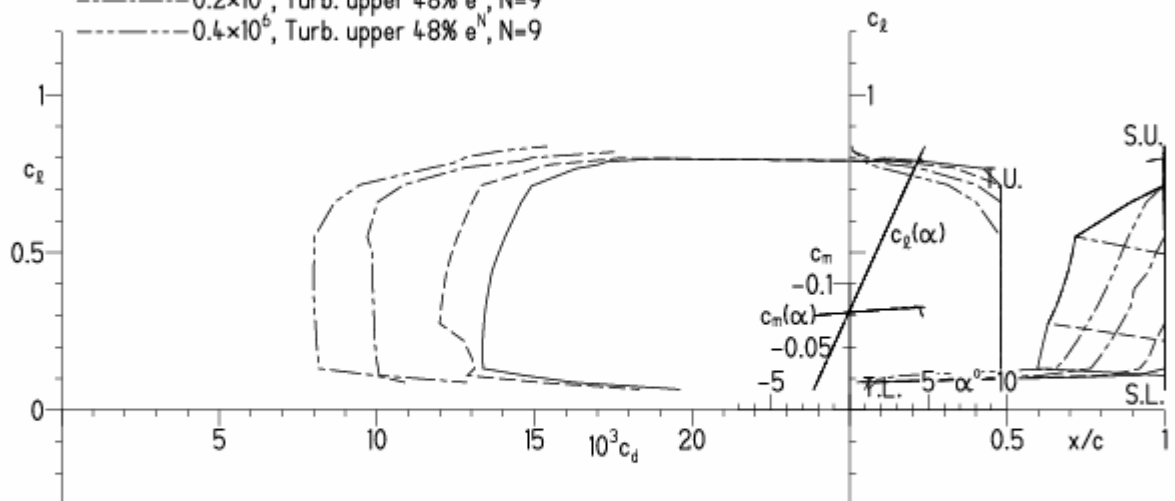
EPPLER 2005 V. 8.5.07 RUN 6.4.11 11:10



EPPLER 2005 V. 8.

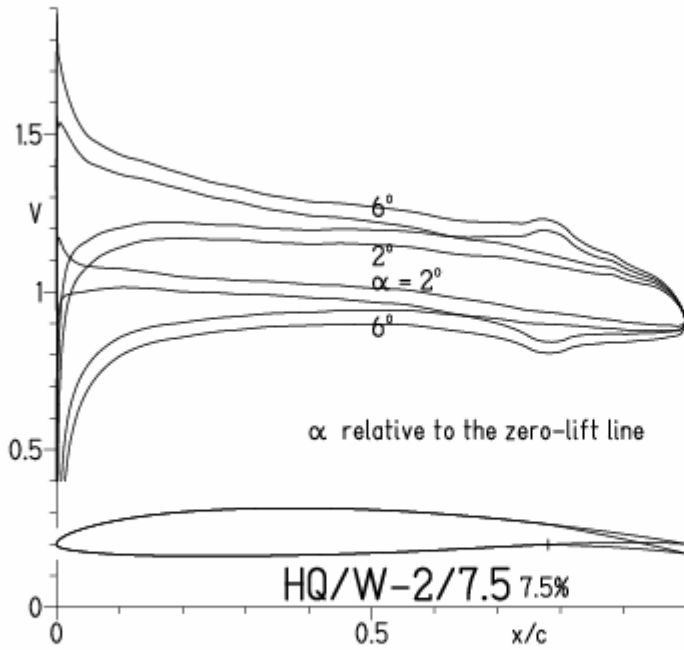
HQ/W-2/7.5 7.5%

- $Re = 75\,000$, Turb. upper 4.8% e^N , N=9
- - - 0.1×10^6 , Turb. upper 4.8% e^N , N=9
- · - 0.2×10^6 , Turb. upper 4.8% e^N , N=9
- - - 0.4×10^6 , Turb. upper 4.8% e^N , N=9



HQ/W-2/7,5, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 6.4.11 11:39

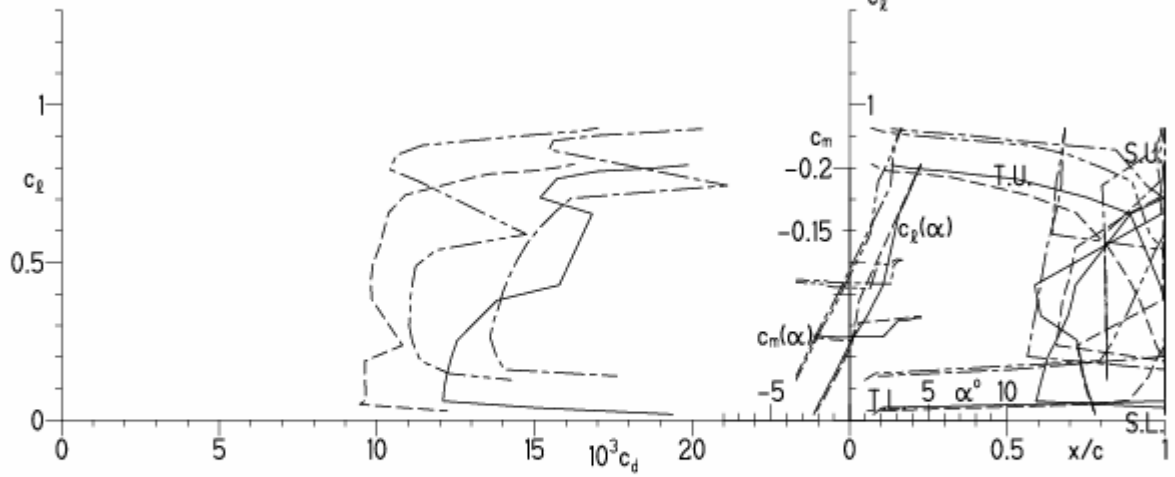


EPPLER 2005 V. 8.5.07 RUN 6.4.11 11:39

HQ/W-2/7.5 7.5%

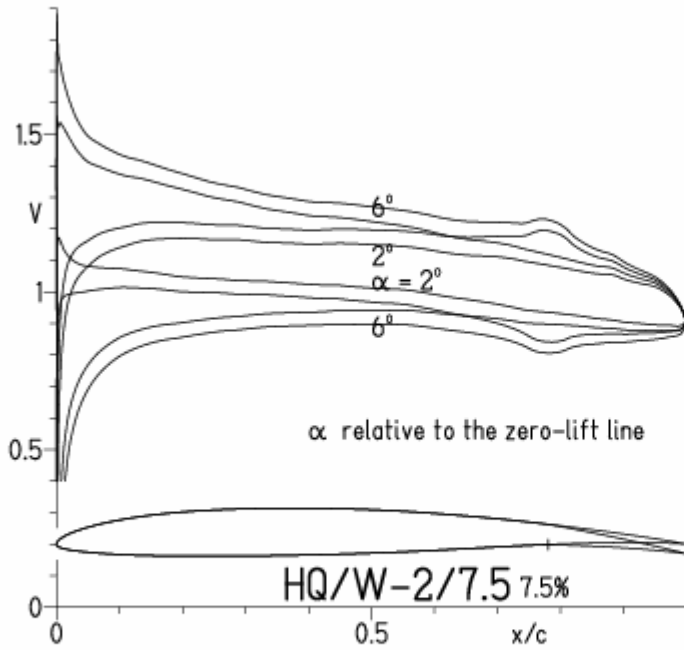
- $Re = 75\,000 e^N, N=11$
- - - $0.15 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 75\,000 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.15 \times 10^6 e^N, N=11$

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



HQ/W-2/7,5, N=9, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 6.4.11 TH43

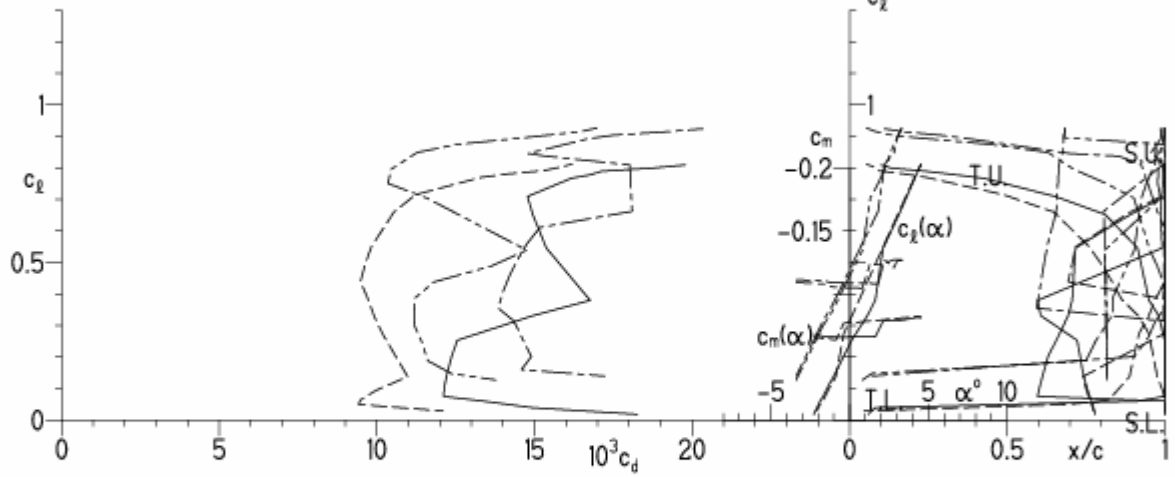


EPPLER 2005 V. 8.5.07 RUN 6.

HQ/W-2/7.5 7.5%

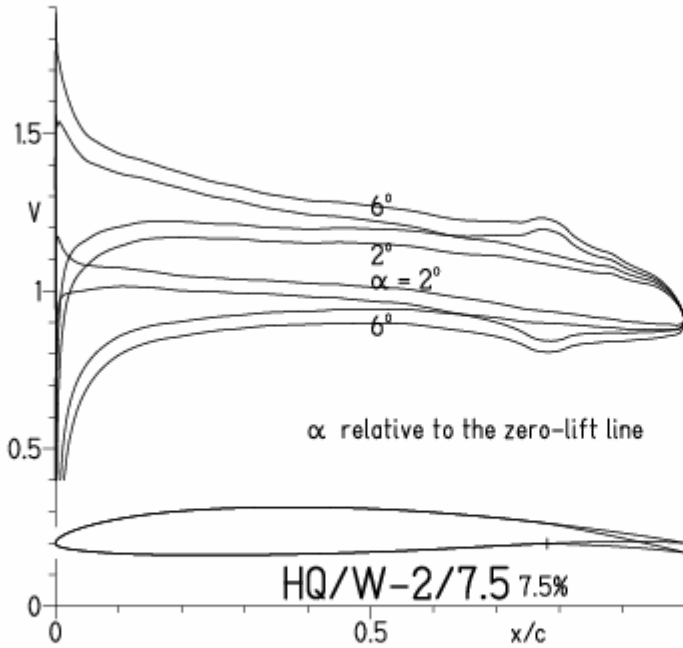
- $Re = 75\,000 e^N, N=9$
- - - $0.15 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 75\,000 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.15 \times 10^6 e^N, N=9$

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



HQ/W-2/7,5, N=9, mit +4° Wölbklappenausschlag Turbulatoreffekt
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 6.4.11 1147

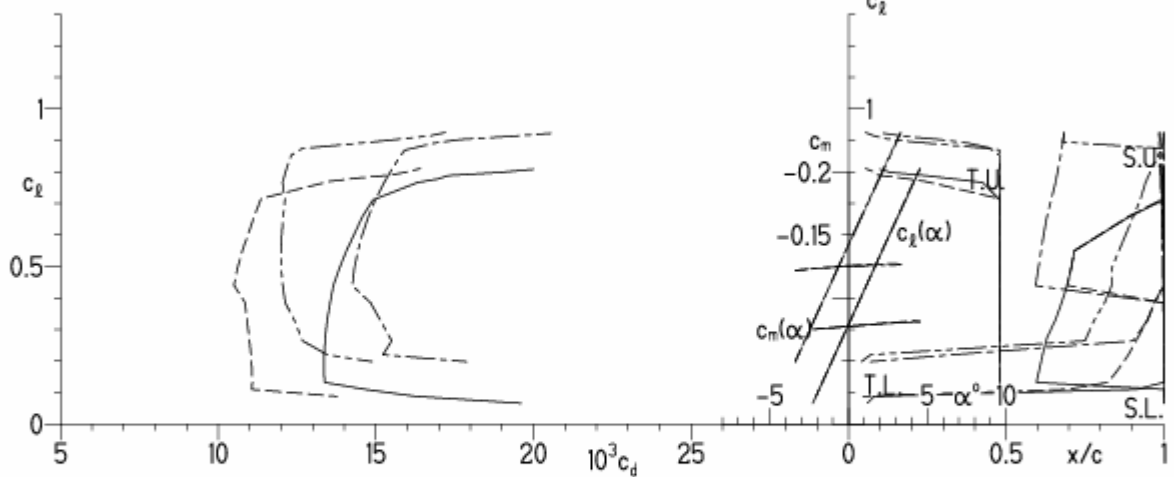


EPPLER 2

HQ/W-2/7.5 7.5%

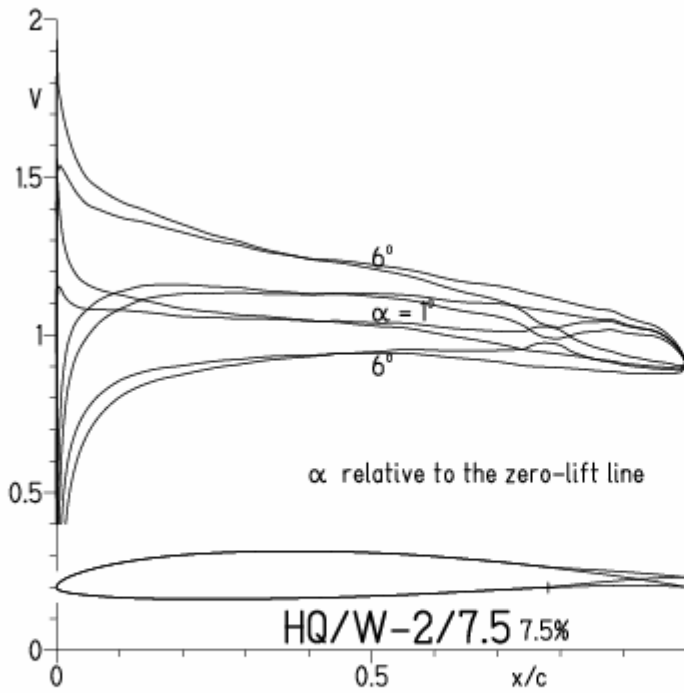
- Re = 75 000, Turb. upper 48% e^N, N=9
- - - 0.15x10⁶, Turb. upper 48% e^N, N=9
- · - 22% Flap 4°, Re = 75 000, Turb. upper 48% e^N, N=9
- · - 22% Flap 4°, Re = 0.15x10⁶, Turb. upper 48% e^N, N=9

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



HQ/W-2/7.5, N=9, mit -4° Wölbklappenausschlag
 (F3B/F3F-Modelle mit 50 g/dm² erreichen damit gut über 300 km/h Höchstgeschwindigkeit)

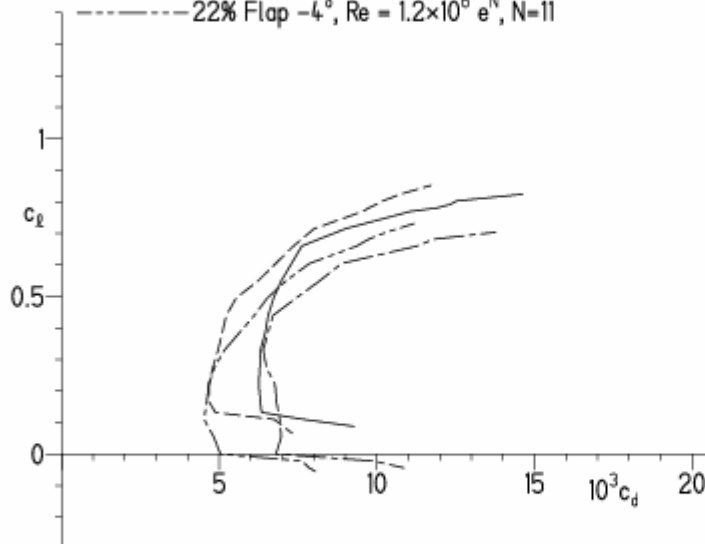
EPPLER 2005 V. 8.5.07 RUN 6.4.11 17:35



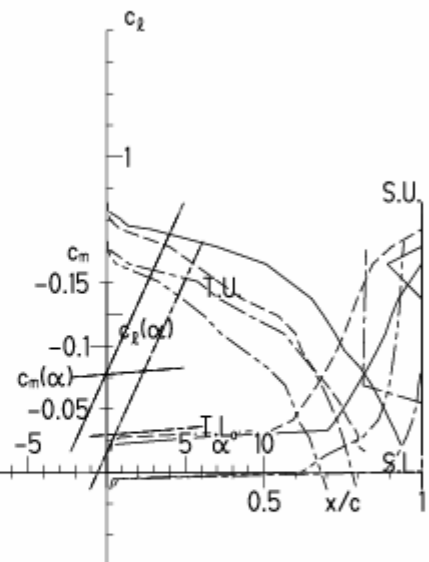
EPPLER 2005 V. 8.5.0

HQ/W-2/7.5 7.5%

- $Re = 0.4 \times 10^6 e^N, N=11$
- - - $1.2 \times 10^6 e^N, N=11$
- · - · - 22% Flap -4°, $Re = 0.4 \times 10^6 e^N, N=11$
- · - · - 22% Flap -4°, $Re = 1.2 \times 10^6 e^N, N=11$

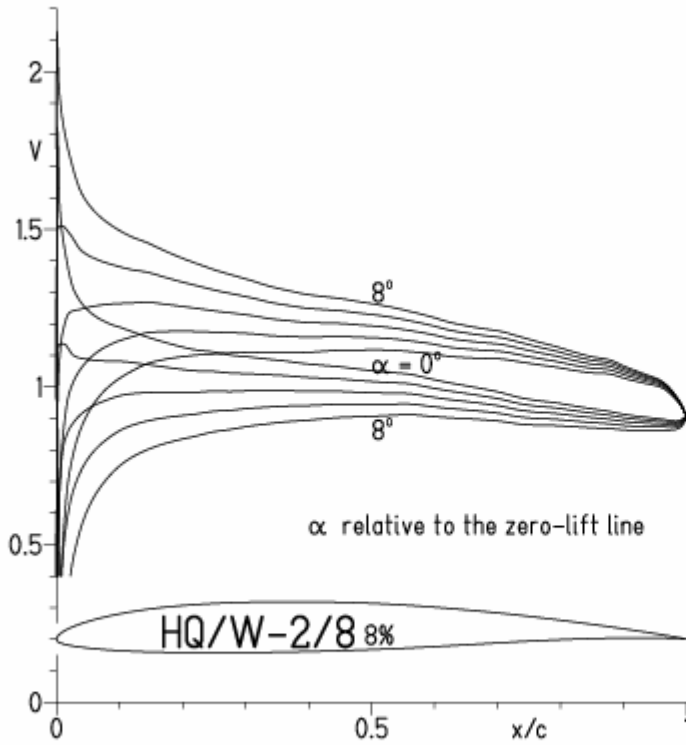


- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



HQ/W-2/8, N=11

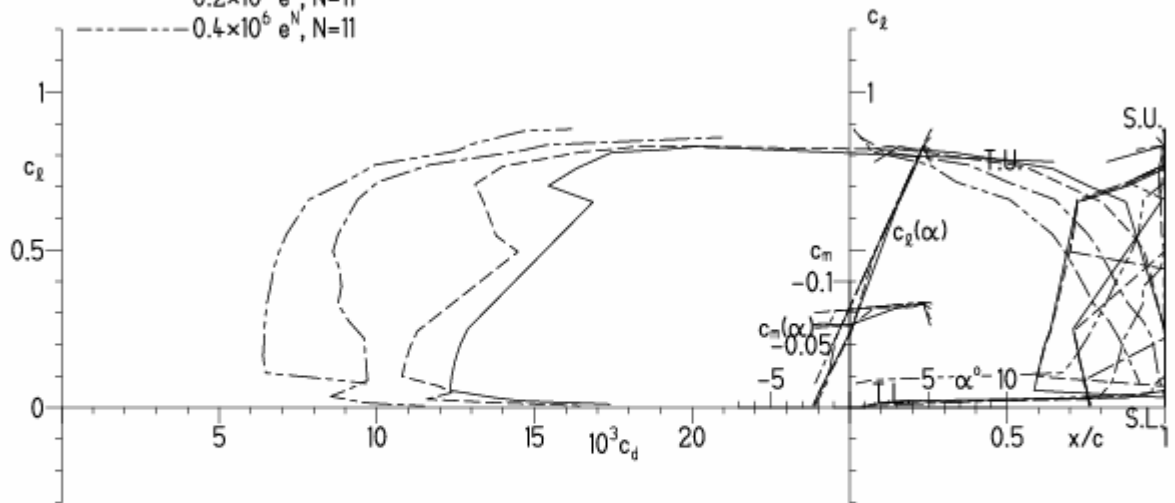
EPPLER 2005 V. 8.5.07 RUN 6.4.11 12:59



EPPLER 2005 V. 8.5.07

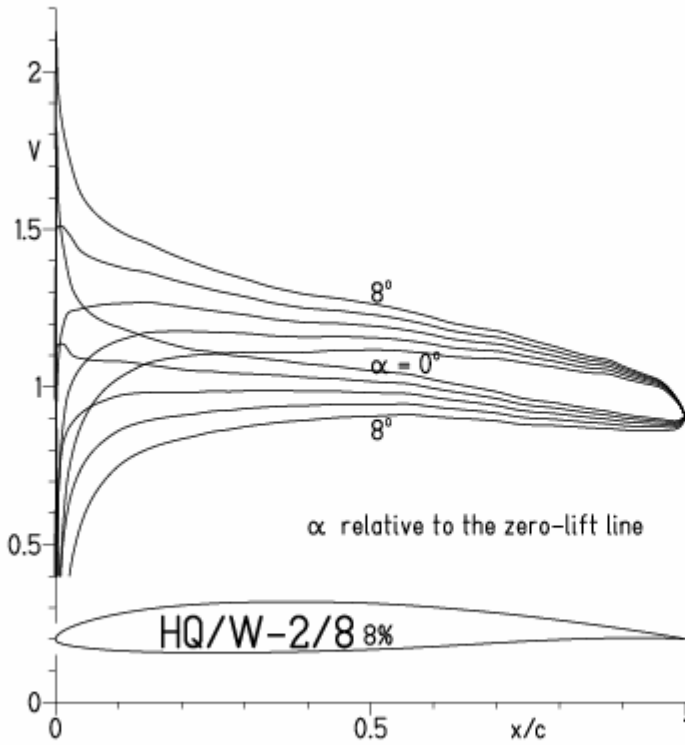
HQ/W-2/8 8%

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



HQ/W-2/8, N=9

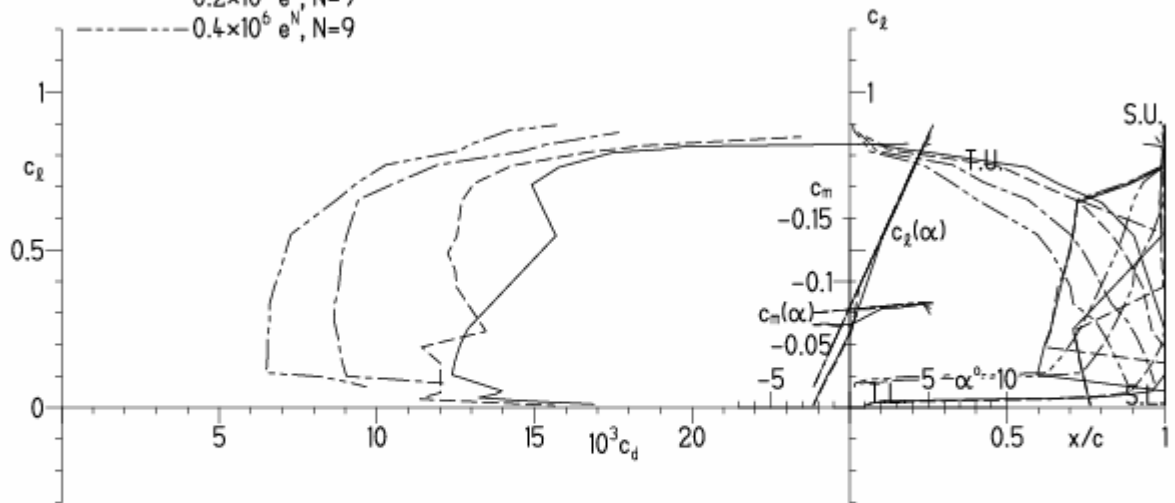
EPPLER 2005 V. 8.5.07 RUN 6.4.11 13:14



EPPLER 2005 V. 8.5.07 RUN 6.4.11 13:14

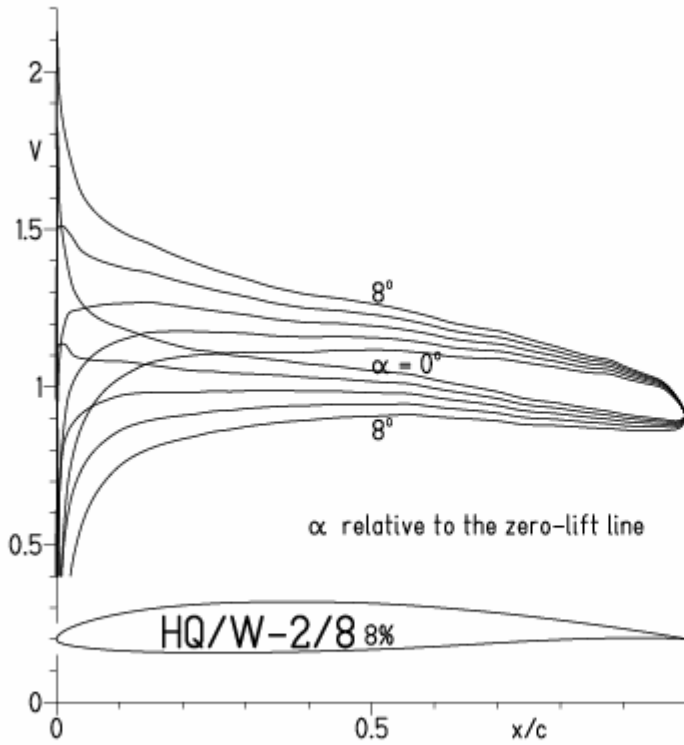
HQ/W-2/8 8%

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



HQ/W-2/8, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

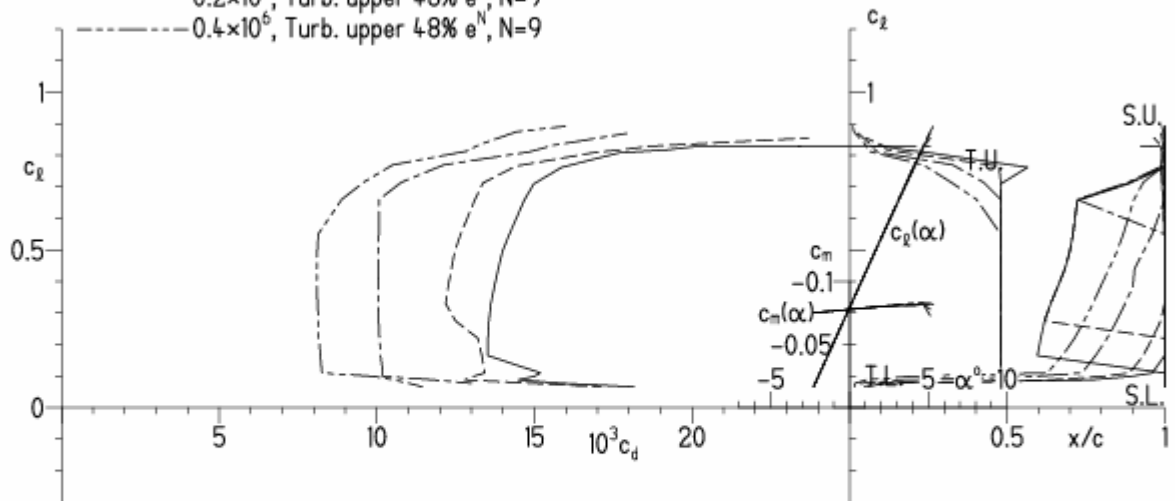
EPPLER 2005 V. 8.5.07 RUN 6.4.11 13:17



EPPLER 2005 V. 8.5.07 RUN 6.4.11 13:17

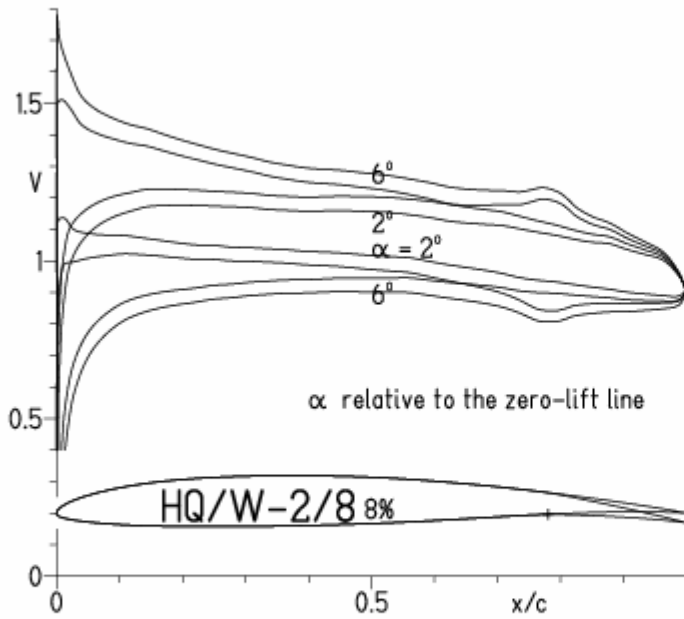
HQ/W-2/8 8%

- $Re = 75\,000$, Turb. upper 48% e^N , $N=9$
- - - 0.1×10^6 , Turb. upper 48% e^N , $N=9$
- · - 0.2×10^6 , Turb. upper 48% e^N , $N=9$
- - - 0.4×10^6 , Turb. upper 48% e^N , $N=9$



HQ/W-2/8, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 6.4.11 16:24

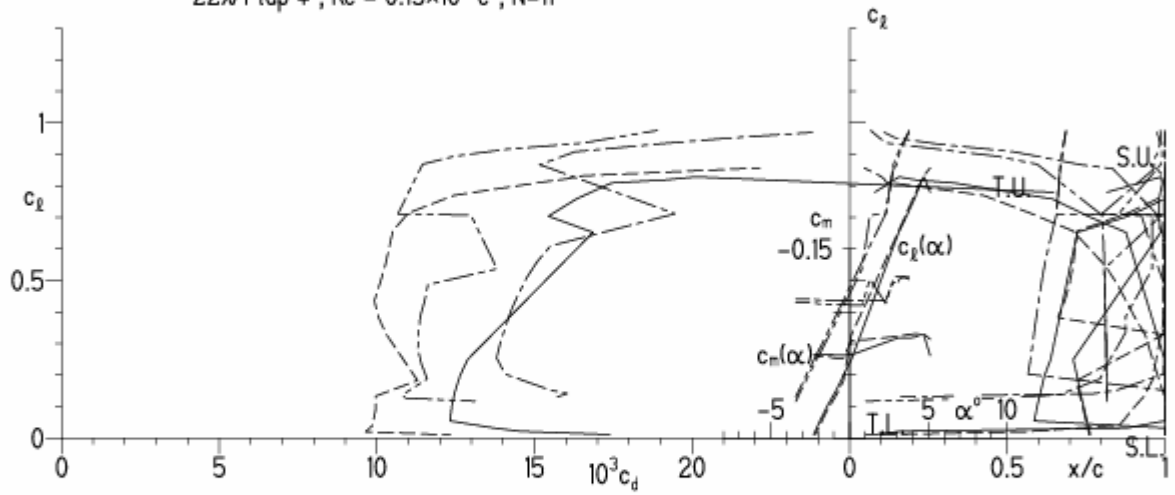


EPPLER 2005 V. 8.5.07 RUN 6.4.11 16:24

HQ/W-2/8 8%

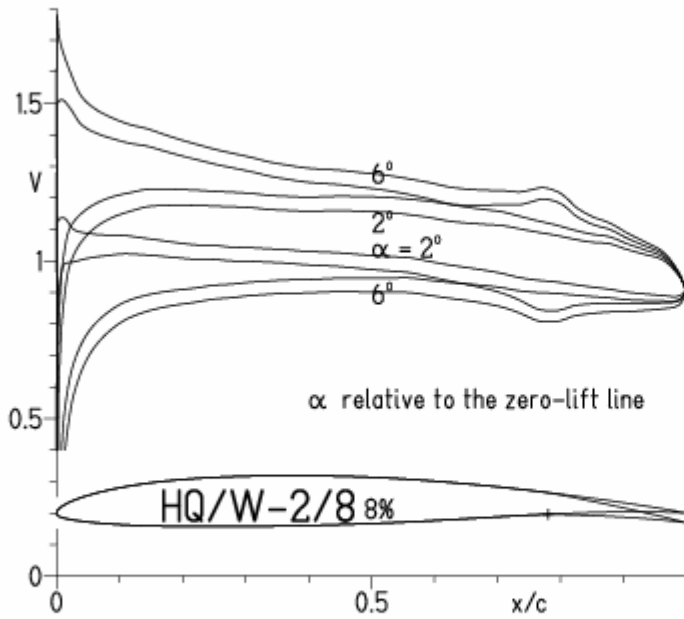
- $Re = 75\,000 e^N, N=11$
- - - $0.15 \times 10^6 e^N, N=11$
- · - · - 22% Flap $4^\circ, Re = 75\,000 e^N, N=11$
- · - · - 22% Flap $4^\circ, Re = 0.15 \times 10^6 e^N, N=11$

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



HQ/W-2/8, N=9, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 6.4.11 16:20

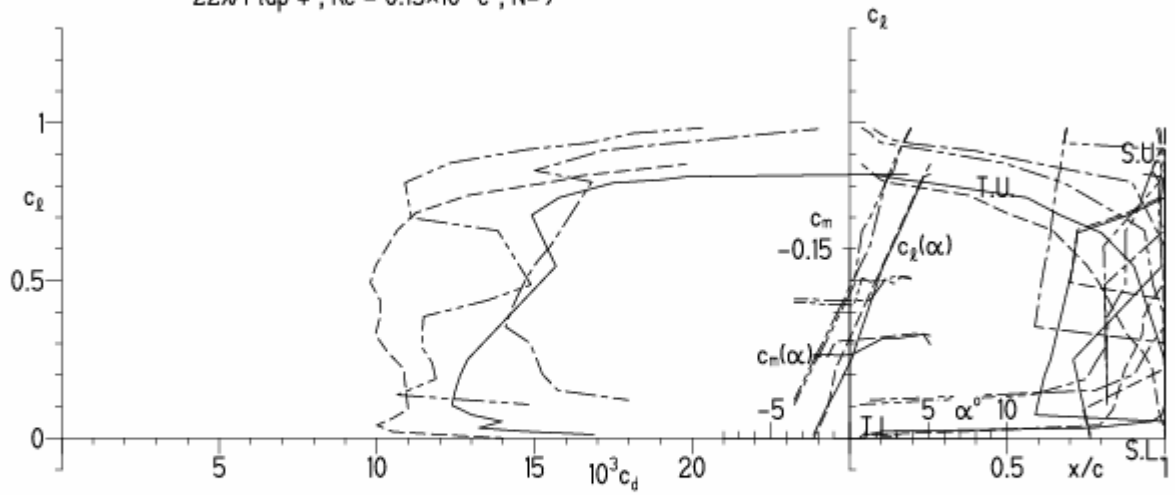


EPPLER 2005 V. 8.5.07 RUN 6.4.11 16:20

HQ/W-2/8 8%

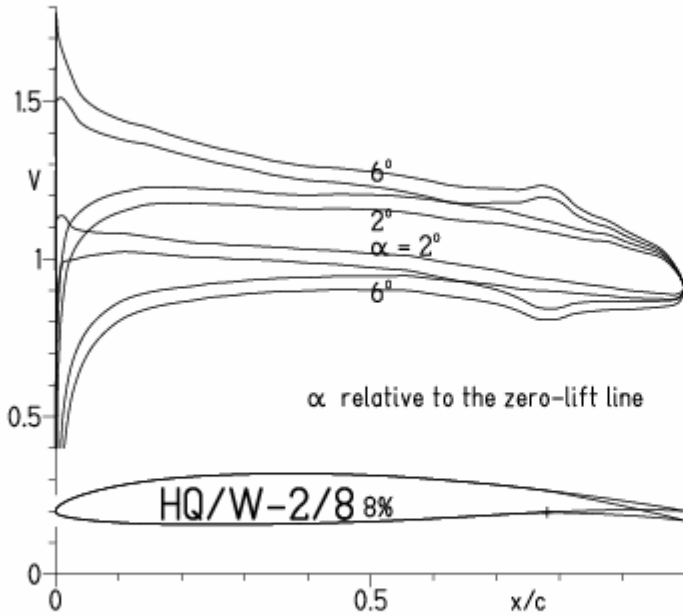
- $Re = 75\,000 e^N, N=9$
- - - $0.15 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 75\,000 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.15 \times 10^6 e^N, N=9$

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



HQ/W-2/8, N=9 mit +4° Wölbklappenausschlag, Turbulatoreffekt
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 6.4.11 16:18

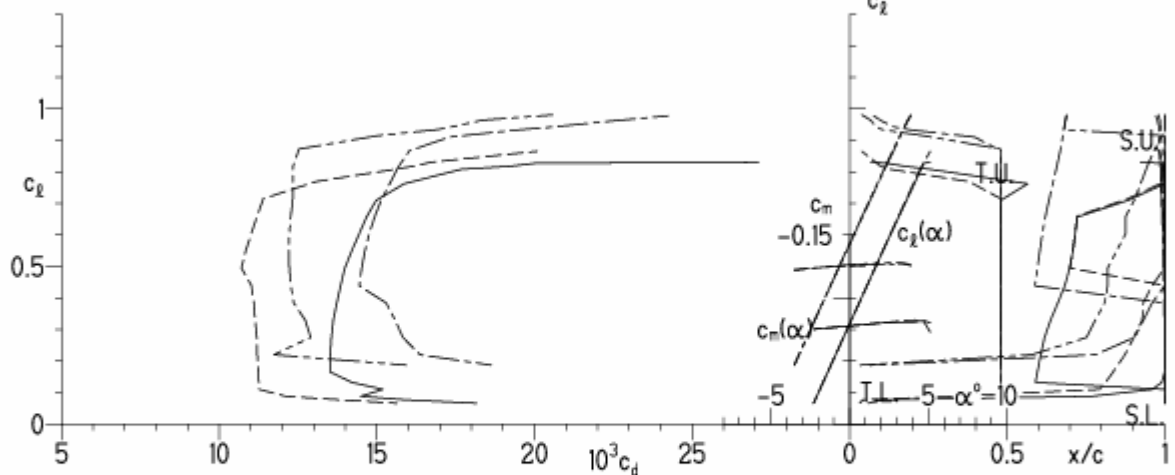


EPPLER 2005 V

HQ/W-2/8 8%

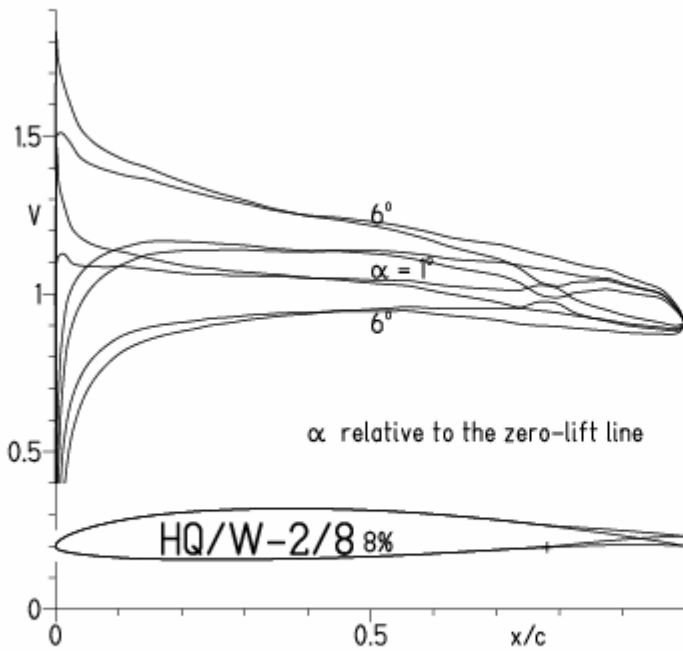
- Re = 75 000, Turb. upper 48% e^N, N=9
- - - 0.15×10⁶, Turb. upper 48% e^N, N=9
- · - 22% Flap 4°, Re = 75 000, Turb. upper 48% e^N, N=9
- · - 22% Flap 4°, Re = 0.15×10⁶, Turb. upper 48% e^N, N=9

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

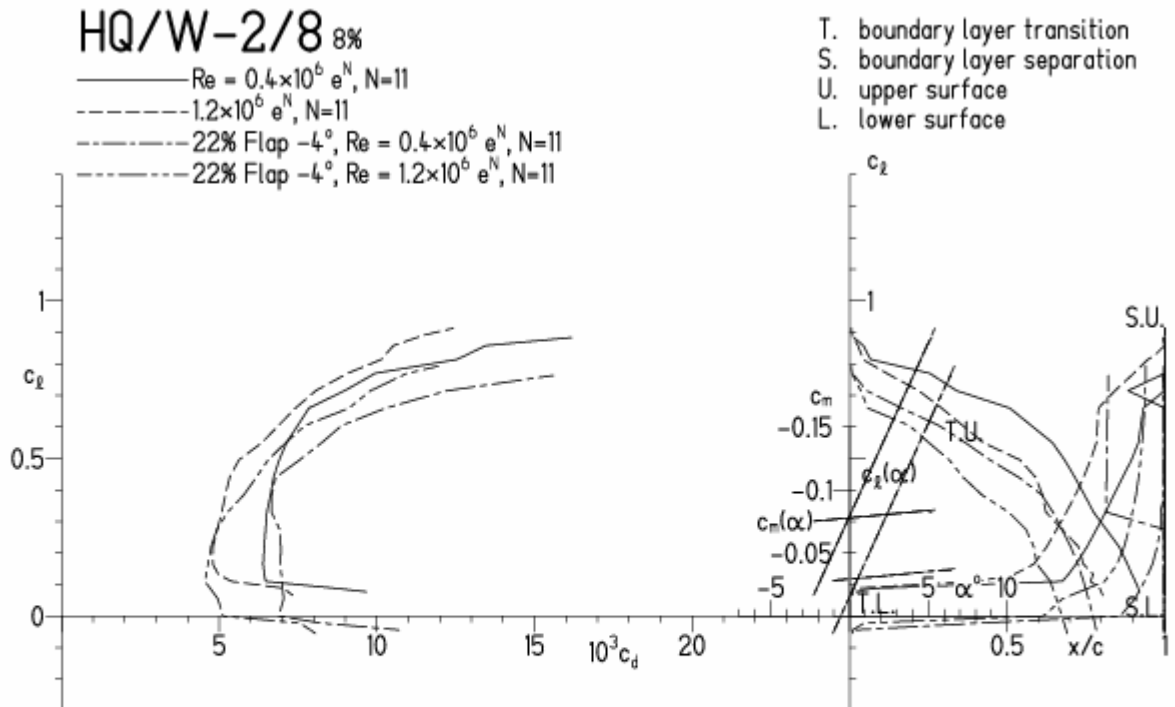


HQ/W-2/8, N=11 mit -4° Wölbklappenausschlag
 (F3B/F3F-Modelle mit 50 g/dm² erreichen damit gut über 300 km/h Höchstgeschwindigkeit)

EPPLER 2005 V. 8.5.07 RUN 6.4.11 17:13

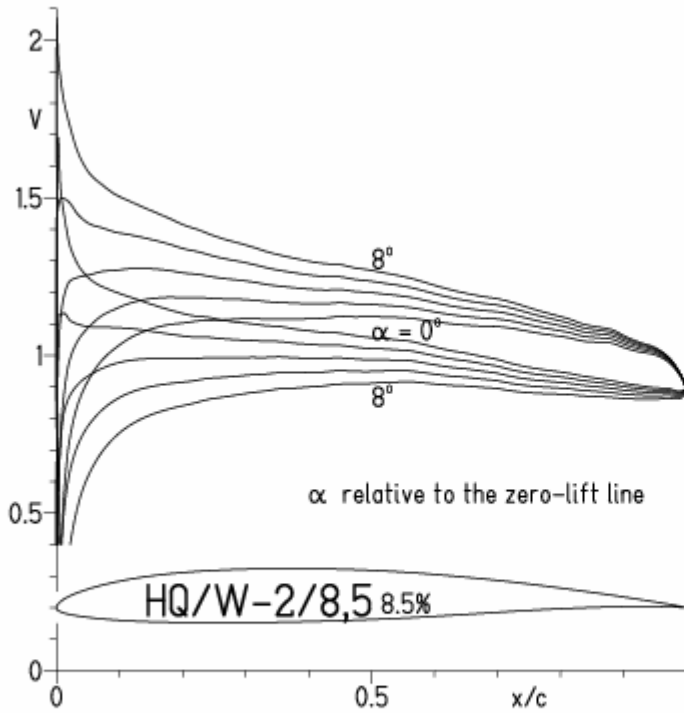


EPPLER 2005 V. 8.5.07 RUN 6.4.



HQ/W-2/8,5, N=11

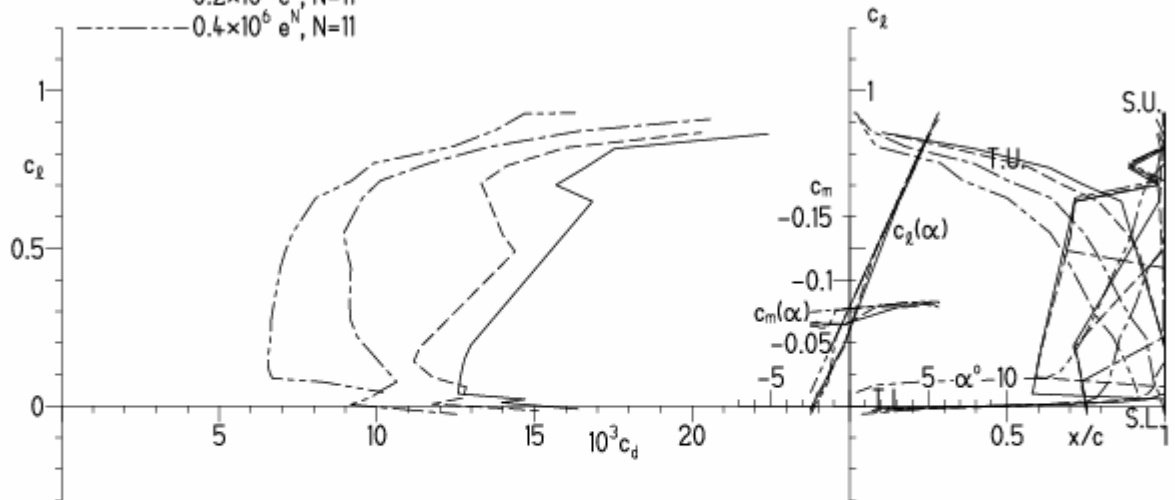
EPPLER 2005 V. 8.5.07 RUN 6.4.11 18:40



EPPLER 2005 V. 8.5.

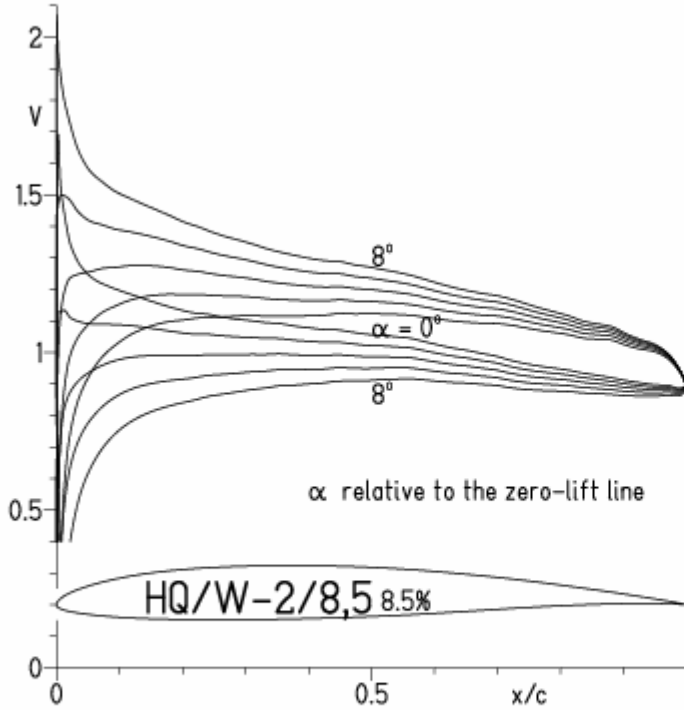
HQ/W-2/8,5 8.5%

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



HQ/W-2/8,5, N=9

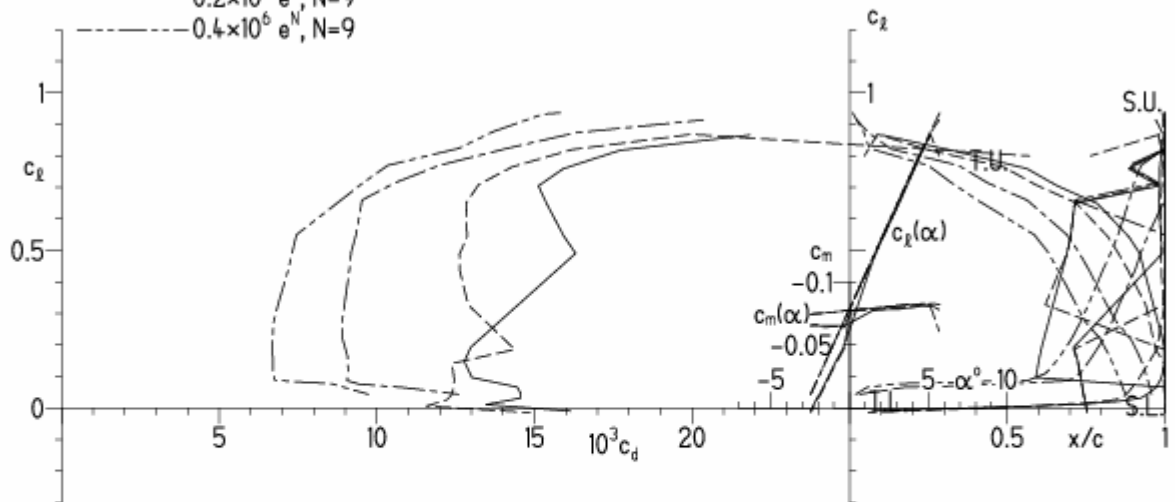
EPPLER 2005 V. 8.5.07 RUN 6.4.11 18:59



EPPLER 200

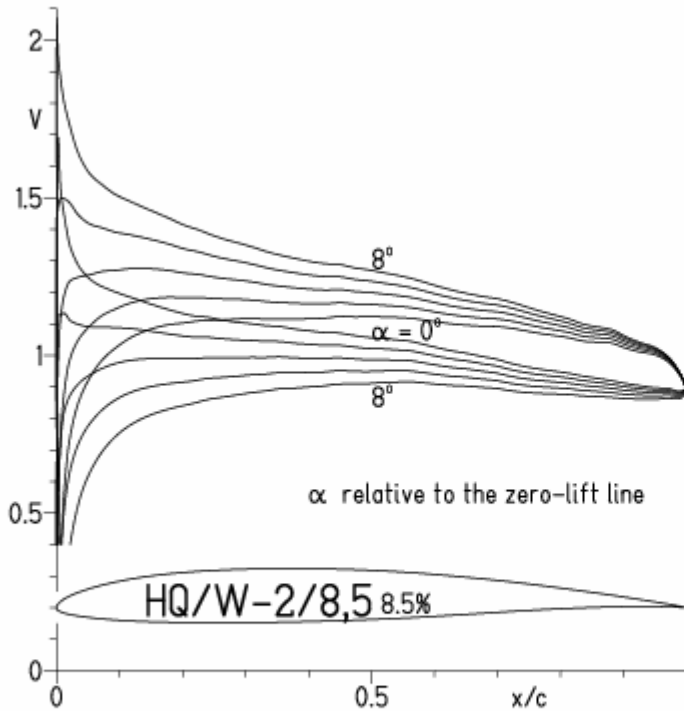
HQ/W-2/8,5 8.5%

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



HQ/W-2/8,5, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

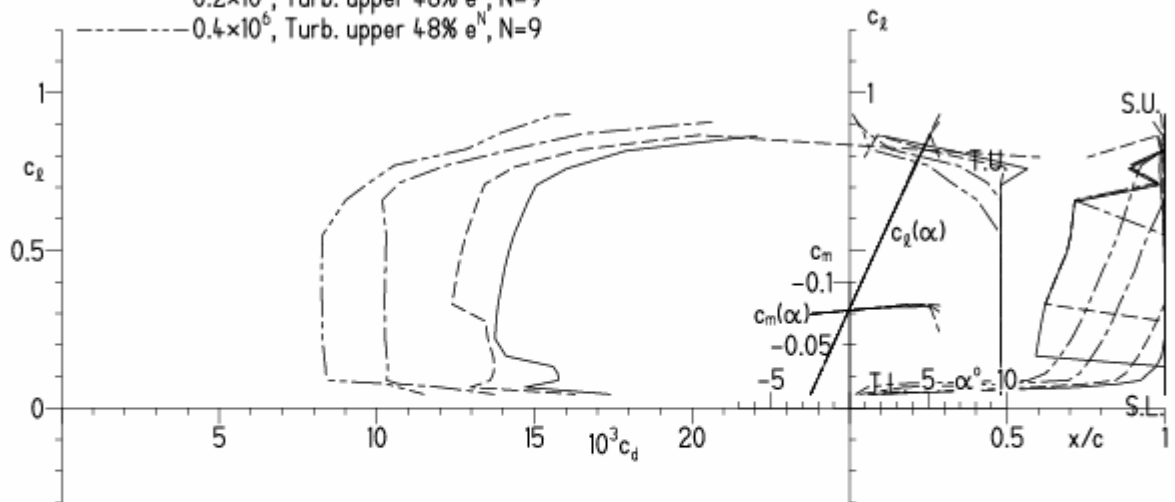
EPPLER 2005 V. 8.5.07 RUN 6.4.11 18:54



EPPLER 2005 V. 8.5

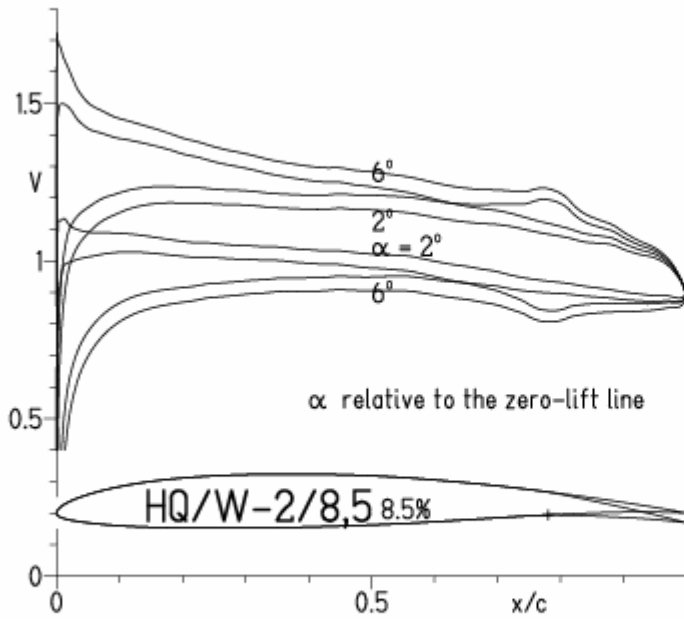
HQ/W-2/8,5 8.5%

- $Re = 75\,000$, Turb. upper 48% e^N , $N=9$
- - - 0.1×10^6 , Turb. upper 48% e^N , $N=9$
- · - 0.2×10^6 , Turb. upper 48% e^N , $N=9$
- - - 0.4×10^6 , Turb. upper 48% e^N , $N=9$



HQ/W-2/8,5, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 6.A.11 19:36

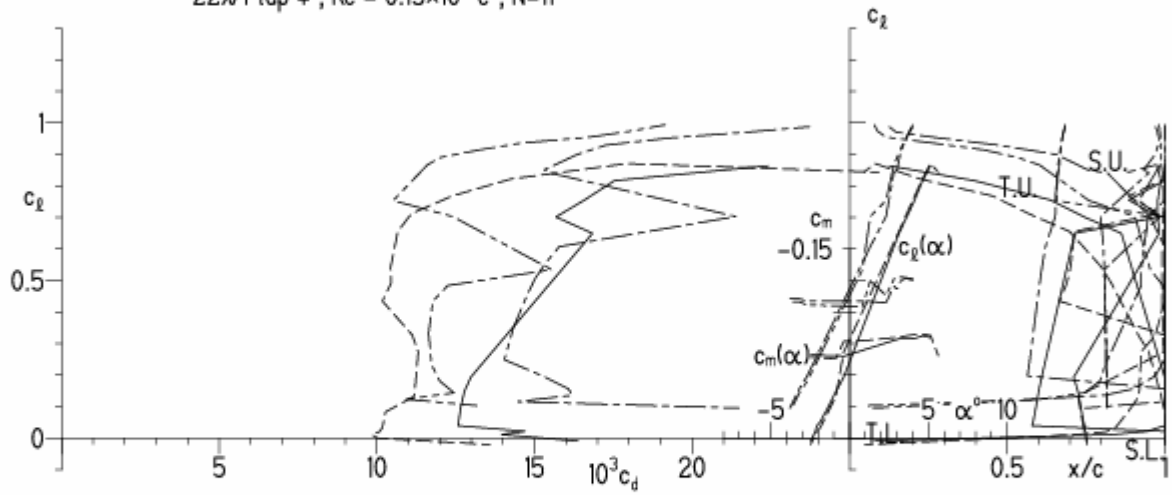


EPPLER 2005 V. 8.5.07 RUN 6.A.11 19:36

HQ/W-2/8,5 8.5%

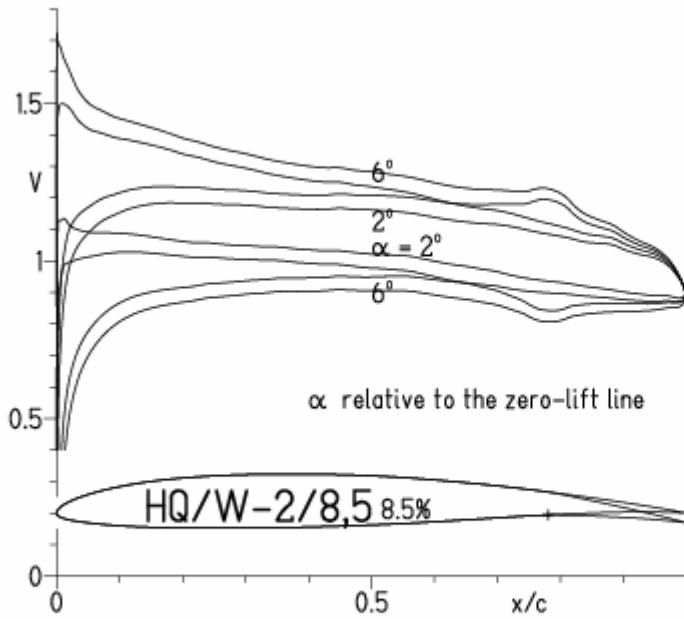
- $Re = 75\,000 e^N, N=11$
- - - $0.15 \times 10^6 e^N, N=11$
- · - · - 22% Flap $4^\circ, Re = 75\,000 e^N, N=11$
- · - · - 22% Flap $4^\circ, Re = 0.15 \times 10^6 e^N, N=11$

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



HQ/W-2/8,5, N=9, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 6.4.11 19:43

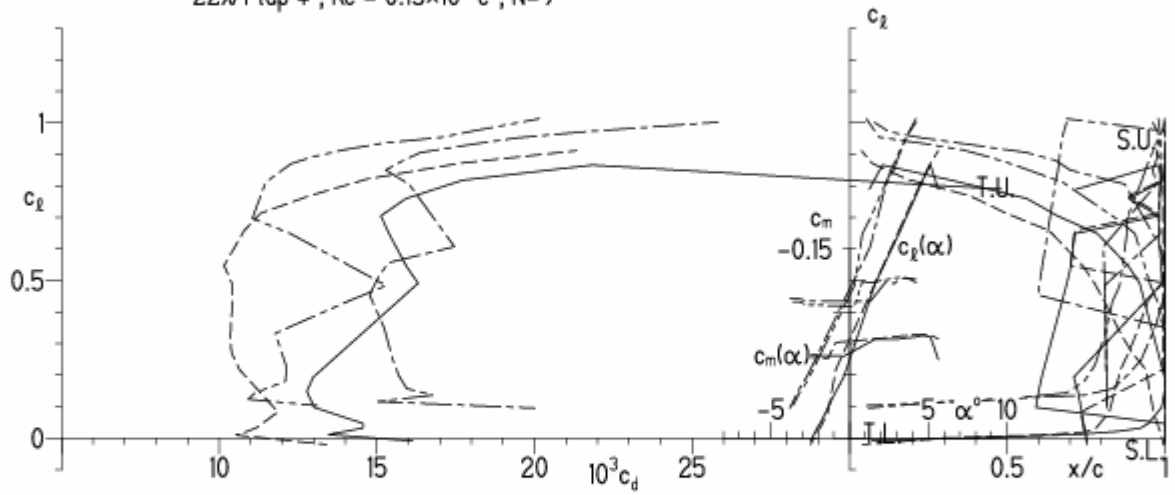


EPPLER 2005 V. 8.5.07 RUN 6.4.11 19:43

HQ/W-2/8,5 8.5%

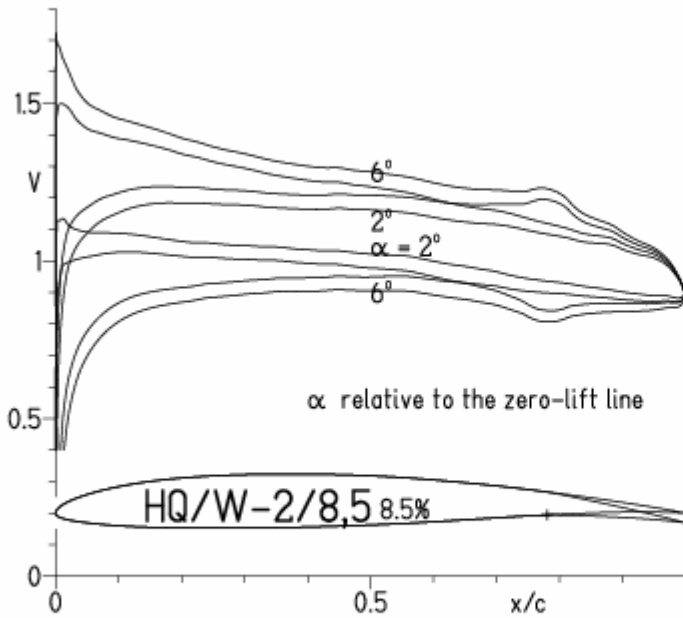
- $Re = 75\,000 e^N, N=9$
- - - $0.15 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 75\,000 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.15 \times 10^6 e^N, N=9$

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



HQ/W-2/8,5, N=9 mit +4° Wölbklappenausschlag, Turbulatoreffekt
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 6.4.11 19:47

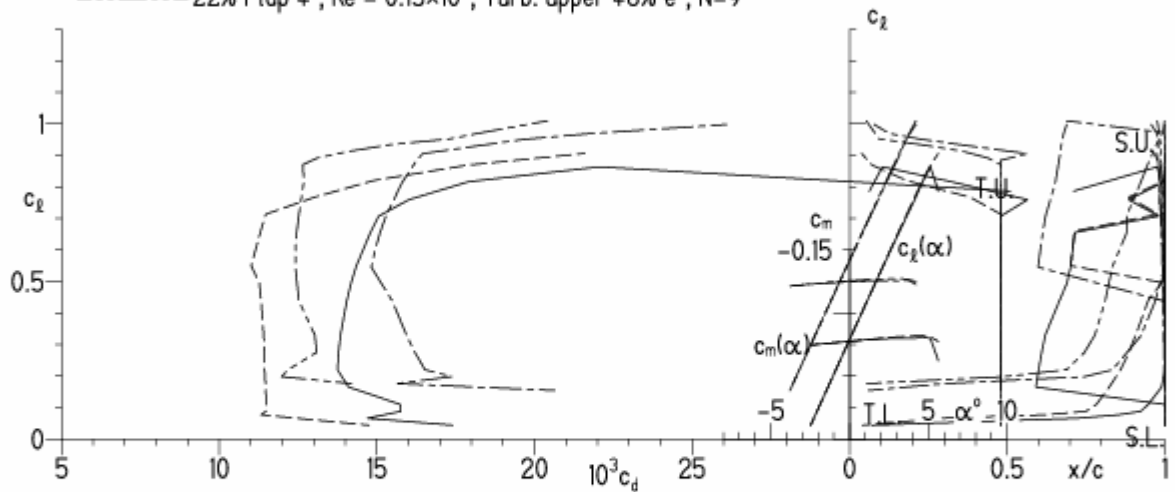


EPPLER 2005 V. 8.5.07 RUN 6.4.11 19:47

HQ/W-2/8,5 8.5%

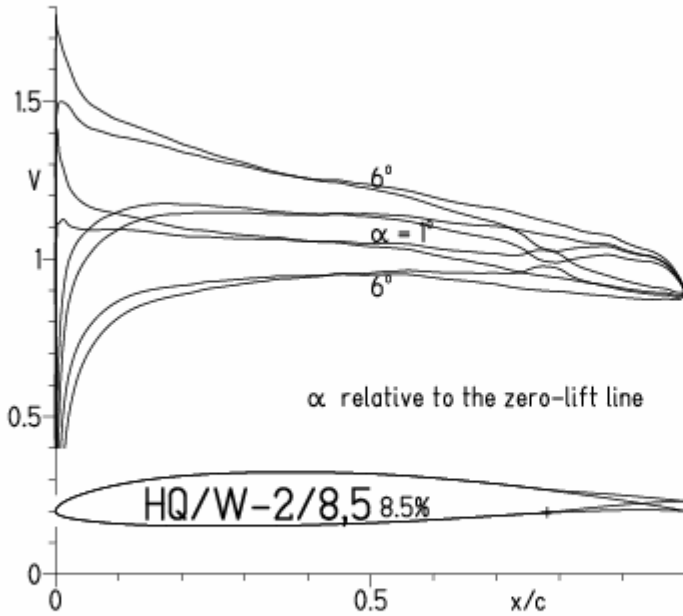
- Re = 75 000, Turb. upper 48% e^N, N=9
- - - 0.15×10⁶, Turb. upper 48% e^N, N=9
- · - 22% Flap 4°, Re = 75 000, Turb. upper 48% e^N, N=9
- · - 22% Flap 4°, Re = 0.15×10⁶, Turb. upper 48% e^N, N=9

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

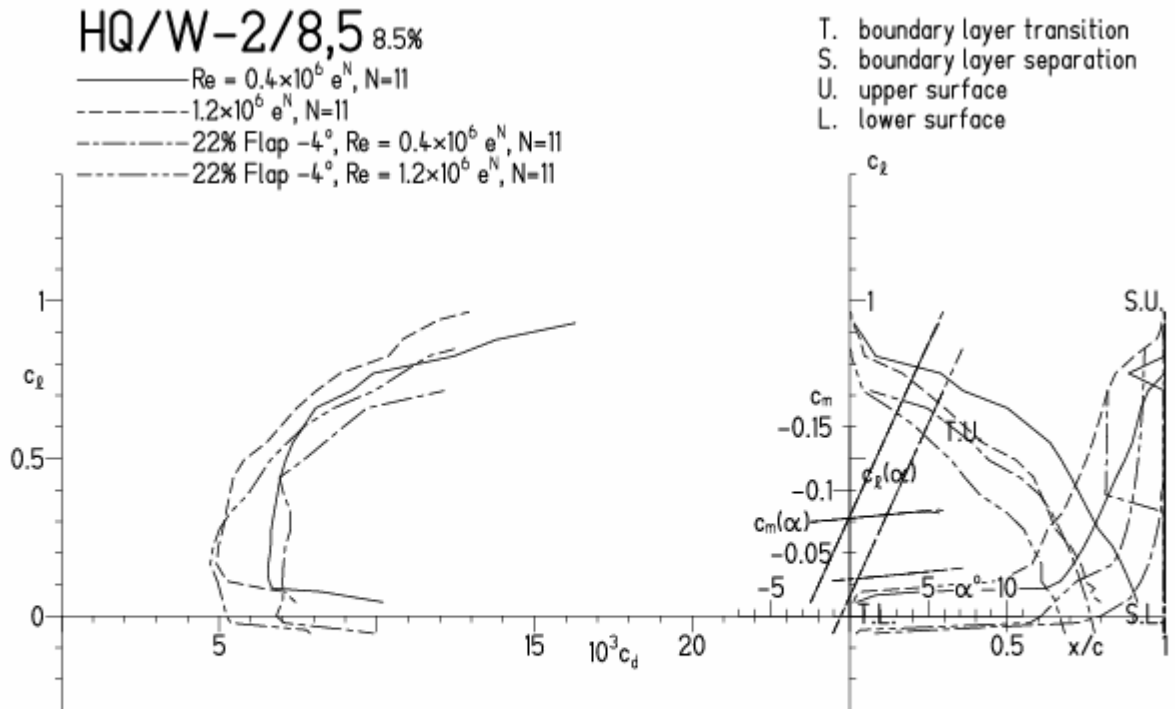


HQ/W-2/8,5, N=11 mit -4° Wölbklappenausschlag
 (F3B/F3F-Modelle mit 50 g/dm² erreichen damit gut über 300 km/h Höchstgeschwindigkeit)

EPPLER 2005 V. 8.5.07 RUN 6.4.11 20:13

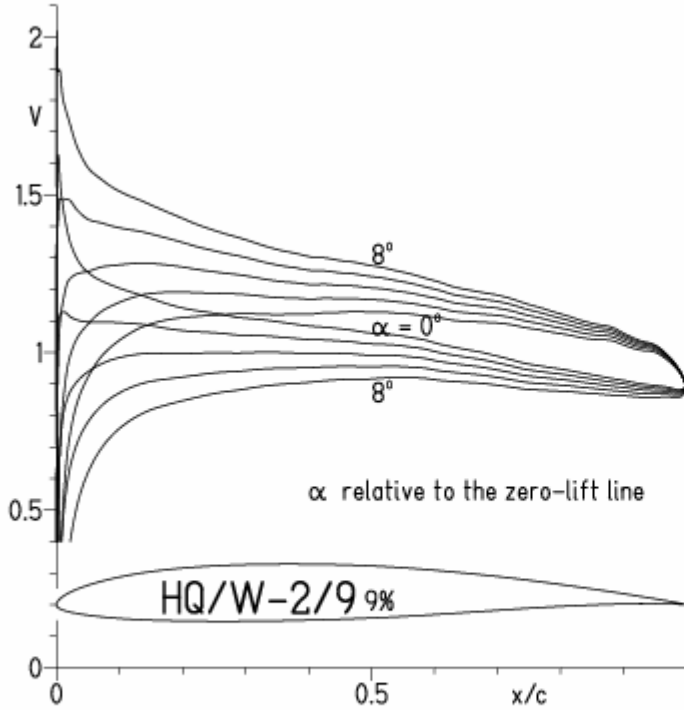


EPPLER 2005 V. 8.5.07 RUN 6.4.11 20:1



HQ/W-2/9, N=11

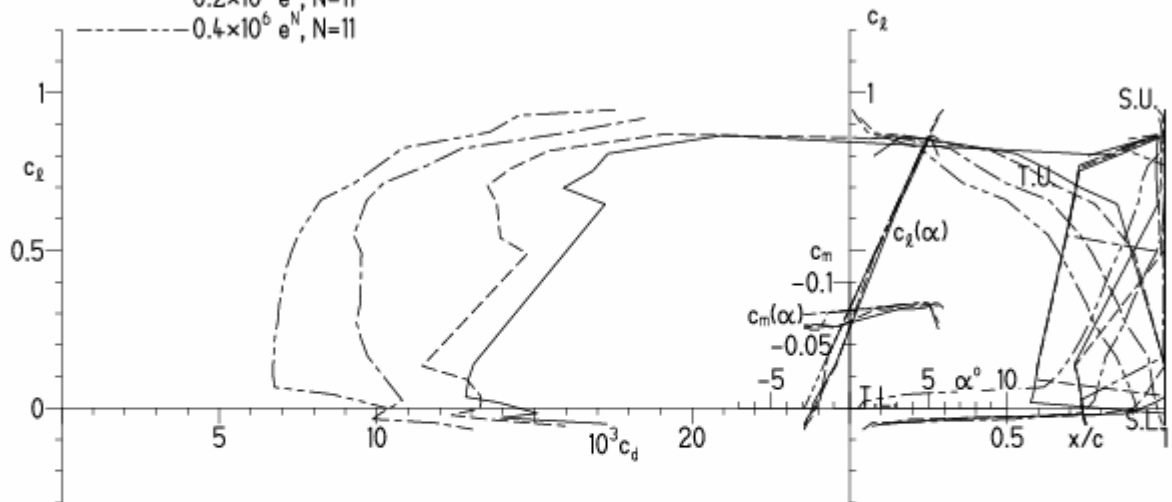
EPPLER 2005 V. 8.5.07 RUN 7.4.11 12:52



EPPLER 2005 V. 8.5.07 RUN 7.4.11 12:52

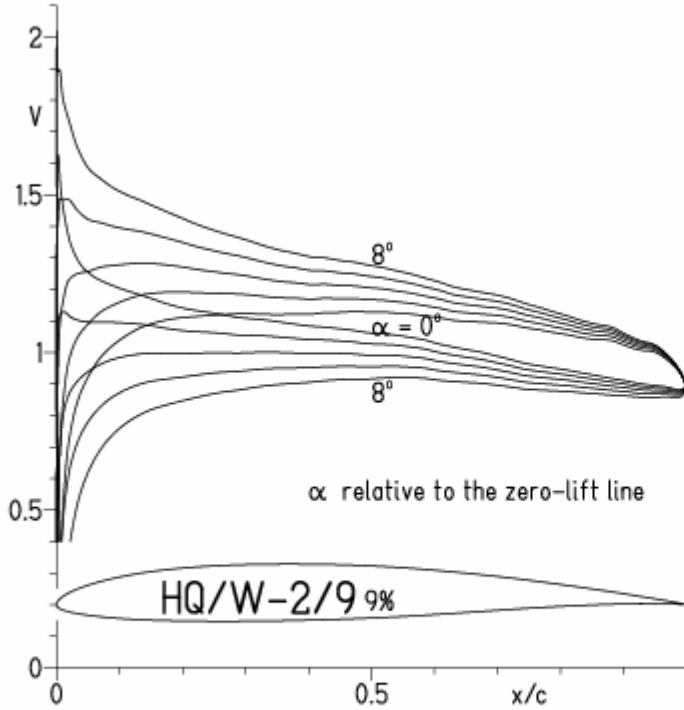
HQ/W-2/9 9%

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



HQ/W-2/9, N=9

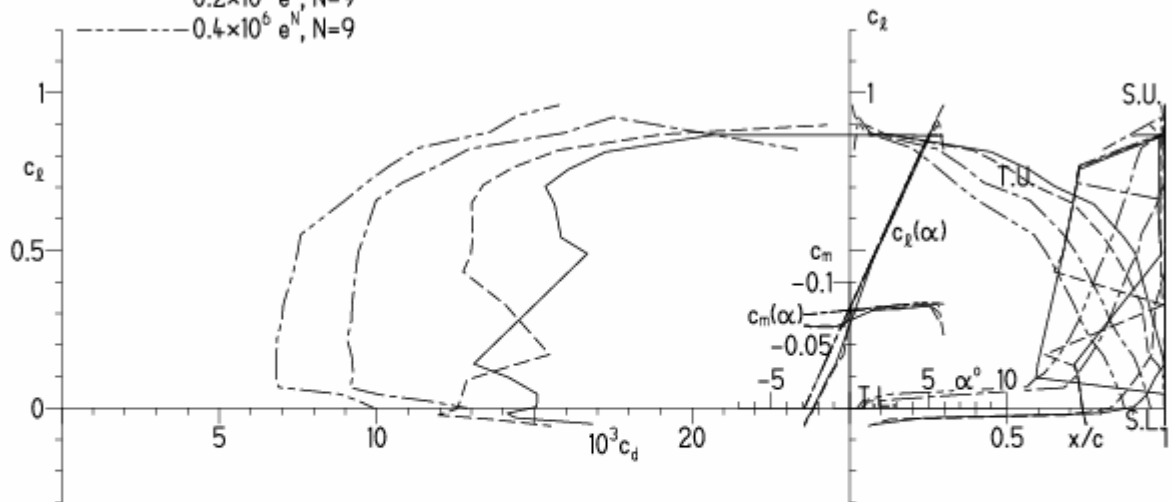
EPPLER 2005 V. 8.5.07 RUN 7.4.11 12:59



EPPLER 2005 V. 8.5.07 RUN 7.4.11 12:59

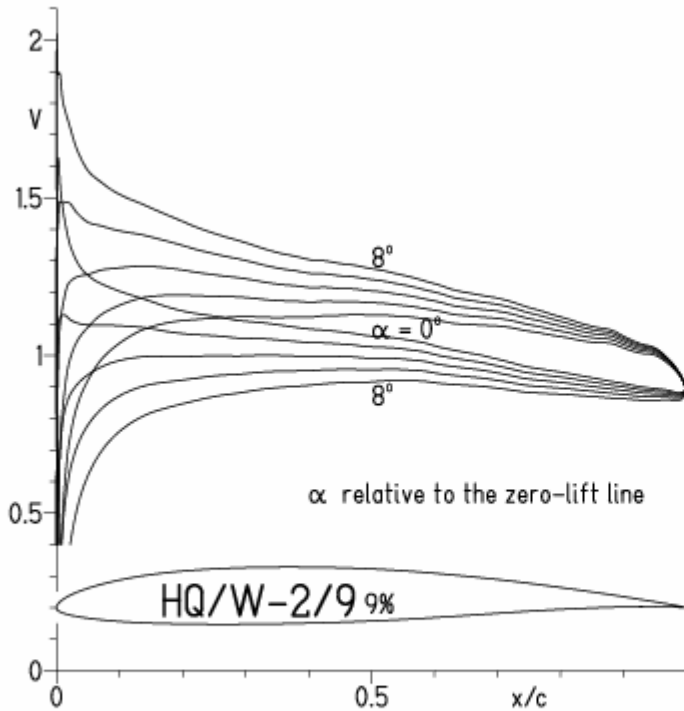
HQ/W-2/9 9%

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



HQ/W-2/9, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

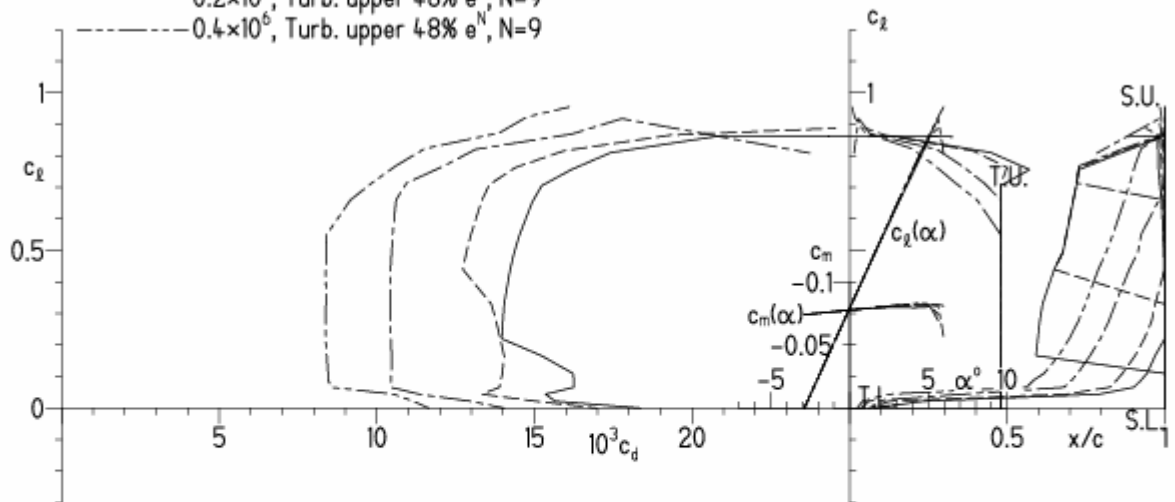
EPPLER 2005 V. 8.5.07 RUN 7.4.11 13:03



EPPLER 2

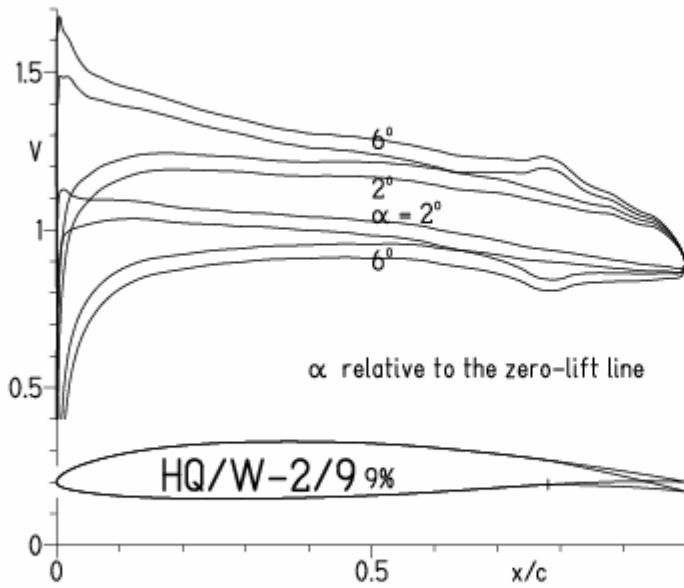
HQ/W-2/9 9%

- $Re = 75\,000$, Turb. upper 48% e^N , $N=9$
- 0.1×10^6 , Turb. upper 48% e^N , $N=9$
- 0.2×10^6 , Turb. upper 48% e^N , $N=9$
- 0.4×10^6 , Turb. upper 48% e^N , $N=9$



HQ/W-2/9, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 7.4.11 15:00

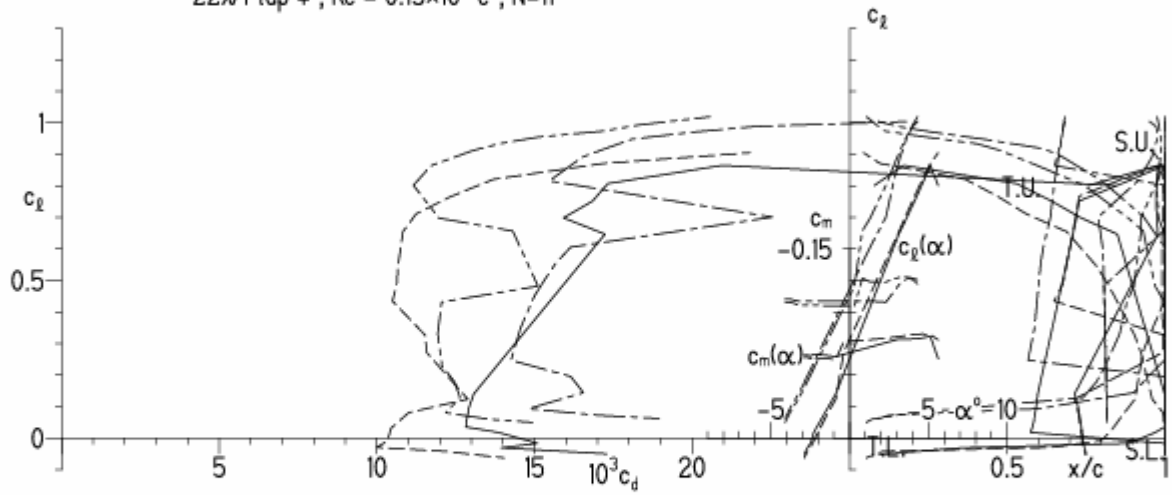


EPPLER

HQ/W-2/9 9%

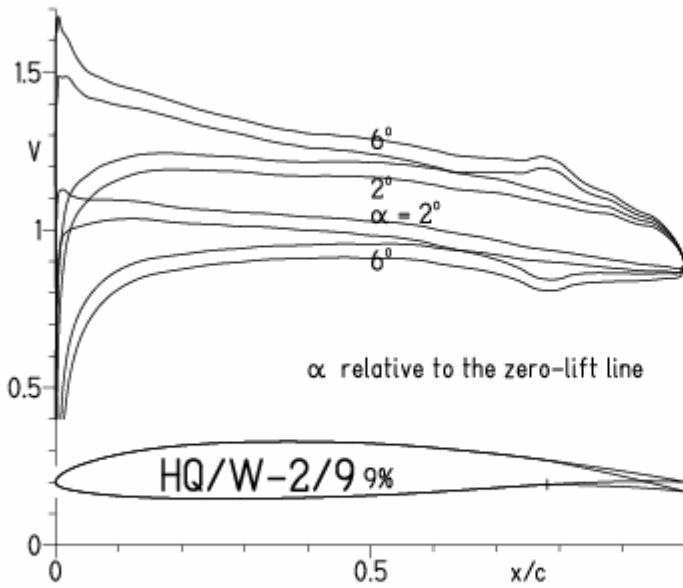
- $Re = 75\,000 e^N, N=11$
- - - $0.15 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 75\,000 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.15 \times 10^6 e^N, N=11$

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



HQ/W-2/9, N=9, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 7.4.II 15:04

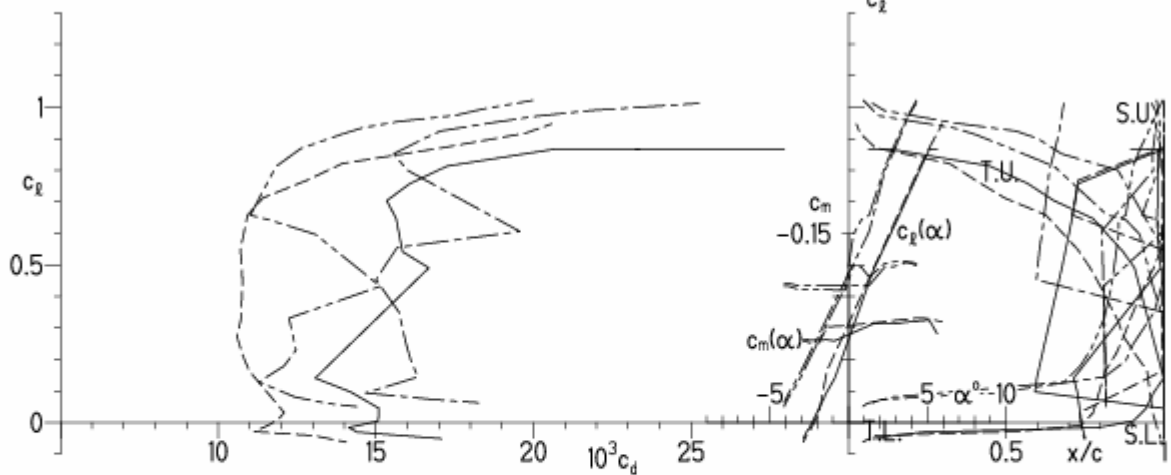


EPPLER 2005 V. 8.5.07 RUN 7.4.II 15:

HQ/W-2/9 9%

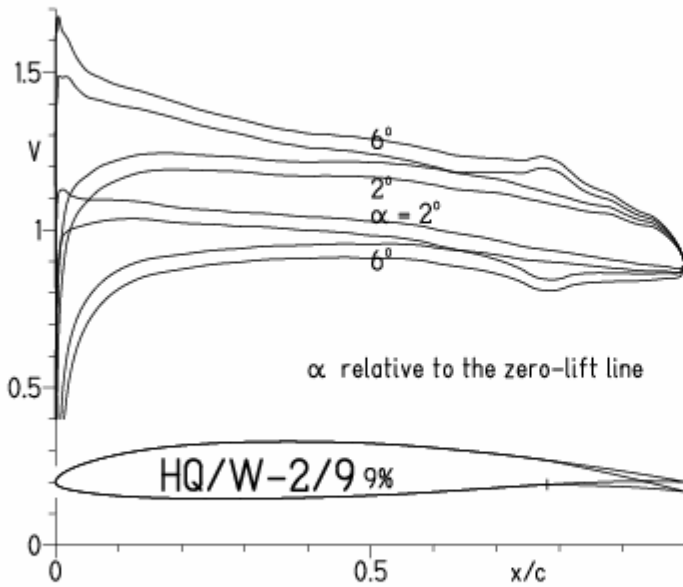
- Re = 75 000 e^N, N=9
- - - 0.15x10⁶ e^N, N=9
- · - 22% Flap 4°, Re = 75 000 e^N, N=9
- · - 22% Flap 4°, Re = 0.15x10⁶ e^N, N=9

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



HQ/W-2/9, N=9 mit +4° Wölbklappenausschlag, Turbulatoreffekt
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 7.4.11 15:09

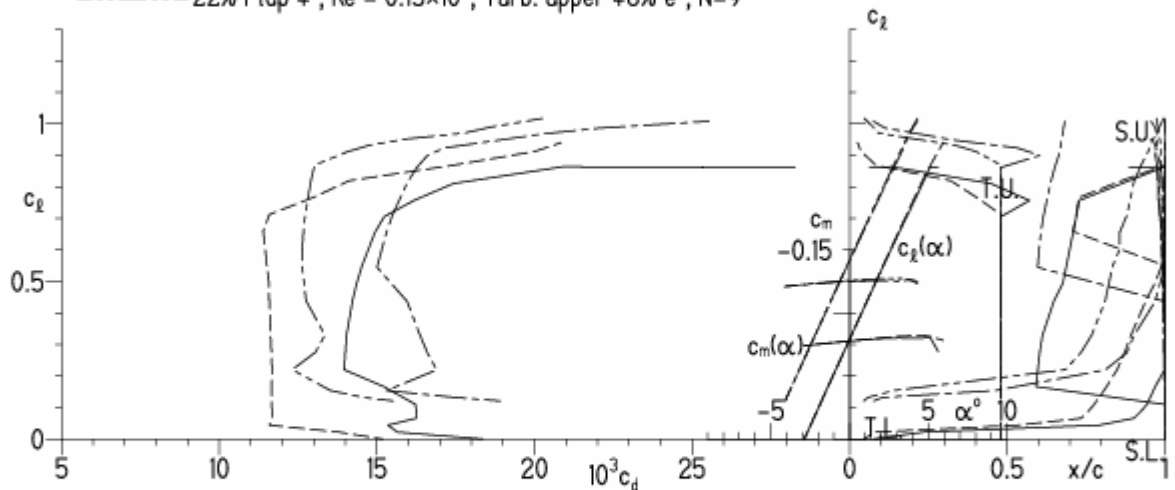


EPPLER 2005 V. 8.5.07 RUN 7.4.11 15:09

HQ/W-2/9 9%

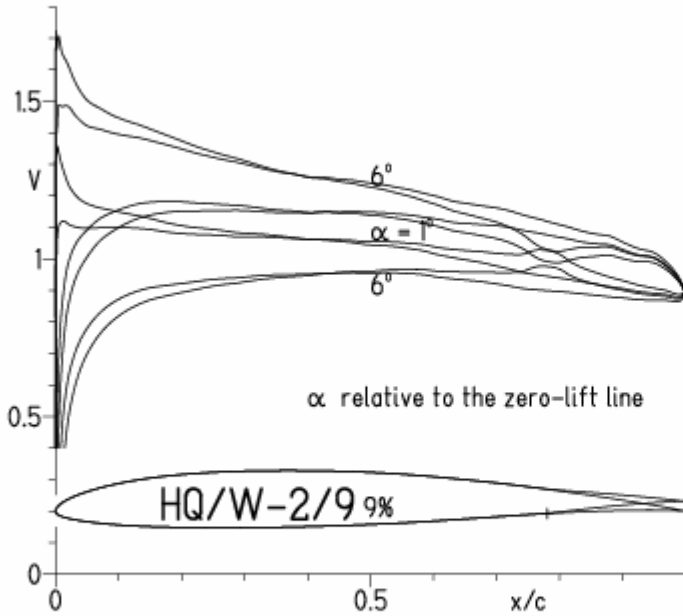
- $Re = 75\,000$, Turb. upper 48% e^N , $N=9$
- - - 0.15×10^6 , Turb. upper 48% e^N , $N=9$
- · - · 22% Flap 4° , $Re = 75\,000$, Turb. upper 48% e^N , $N=9$
- · - · 22% Flap 4° , $Re = 0.15 \times 10^6$, Turb. upper 48% e^N , $N=9$

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

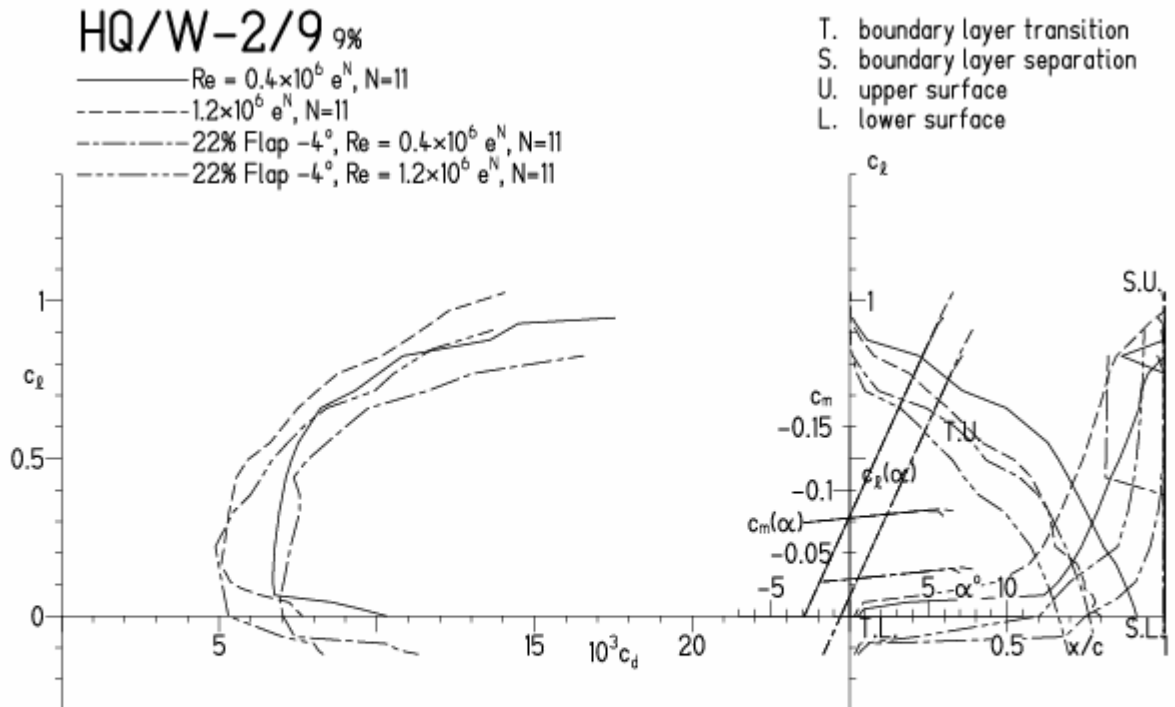


HQ/W-2/9, N=11 mit -4° Wölbklappenausschlag
 (F3B/F3F-Modelle mit 50 g/dm^2 erreichen damit gut über 300 km/h Höchstgeschwindigkeit)

EPPLER 2005 V. 8.5.07 RUN 7.4.11 15:37

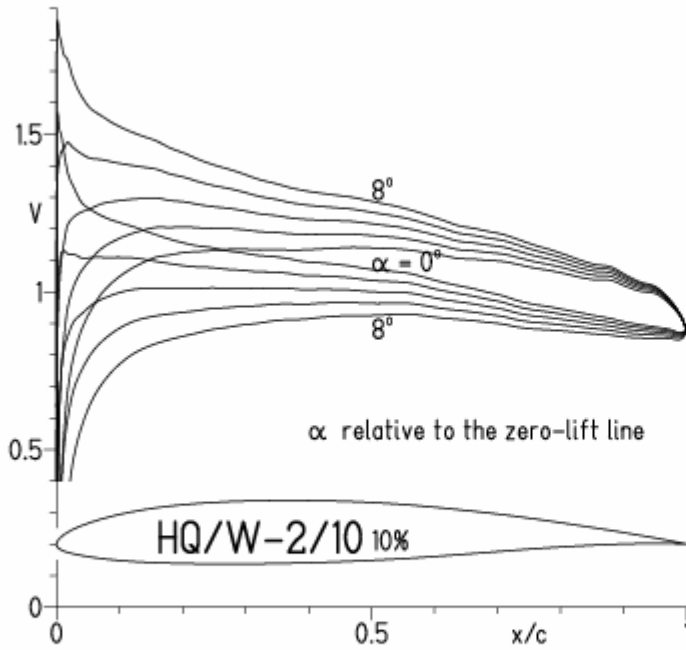


EPPLER 2005 V. 8.5



HQ/W-2/10, N=11

EPPLER 2005 V. 8.5.07 RUN 7.A.11 15:54

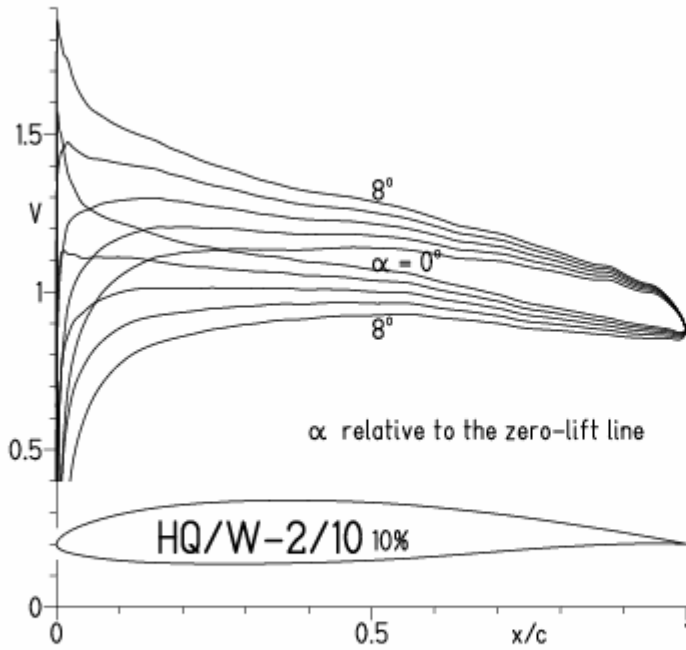


EPPLER 2005 V. 8.5.07 RUN 7.A.11 15:54

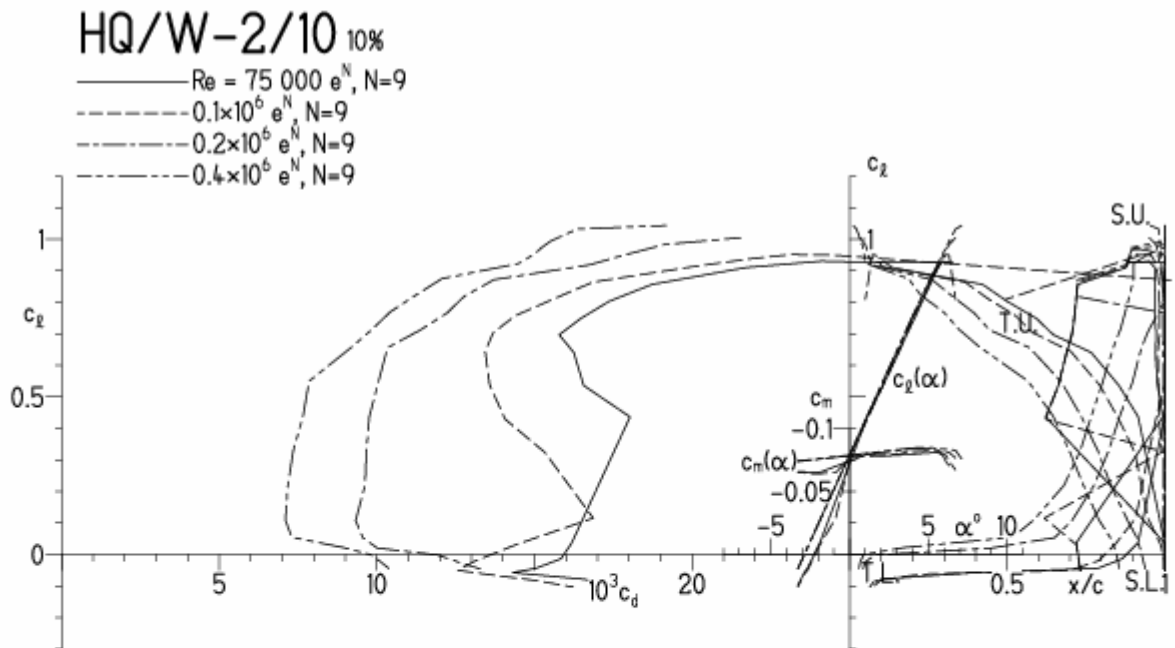


HQ/W-2/10, N=9

EPPLER 2005 V. 8.5.07 RUN 7.A.11 15:59

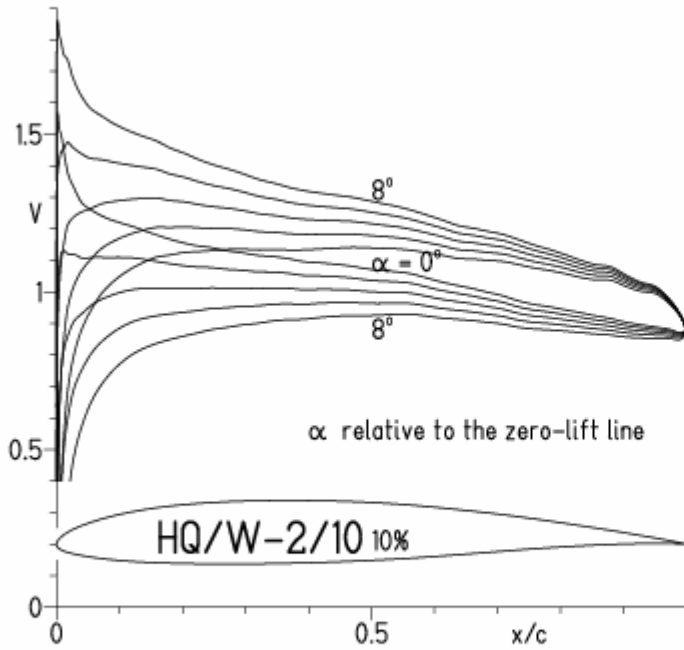


EPPLER 2005 V. 8.5.07 RUN 7.A.11 15:59



HQ/W-2/10, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

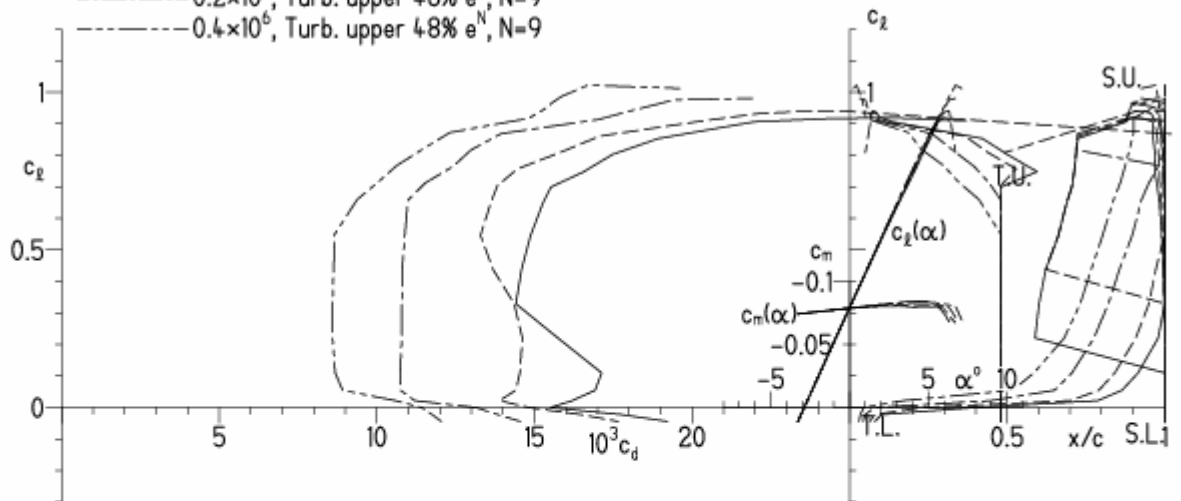
EPPLER 2005 V. 8.5.07 RUN 7.A.II 16:02



EPPLER 2005 V. 8.5.07 RUN 7.A.II 1

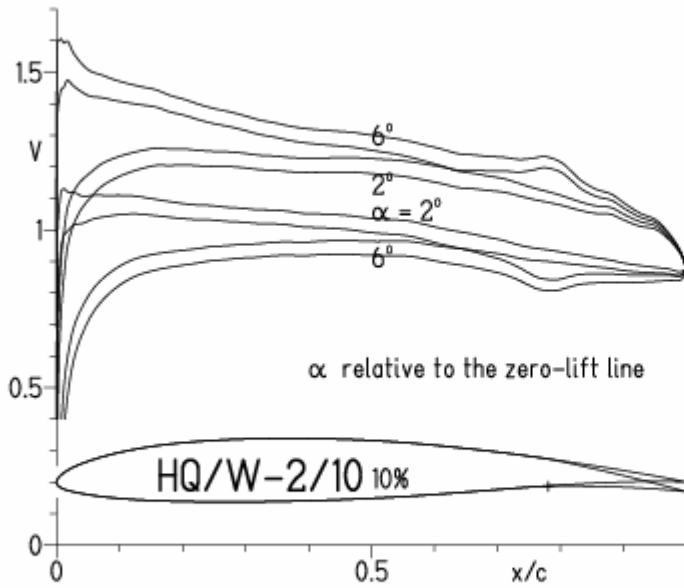
HQ/W-2/10 10%

- Re = 75 000, Turb. upper 48% e^N, N=9
- - - 0.1×10⁶, Turb. upper 48% e^N, N=9
- · - 0.2×10⁶, Turb. upper 48% e^N, N=9
- - - 0.4×10⁶, Turb. upper 48% e^N, N=9

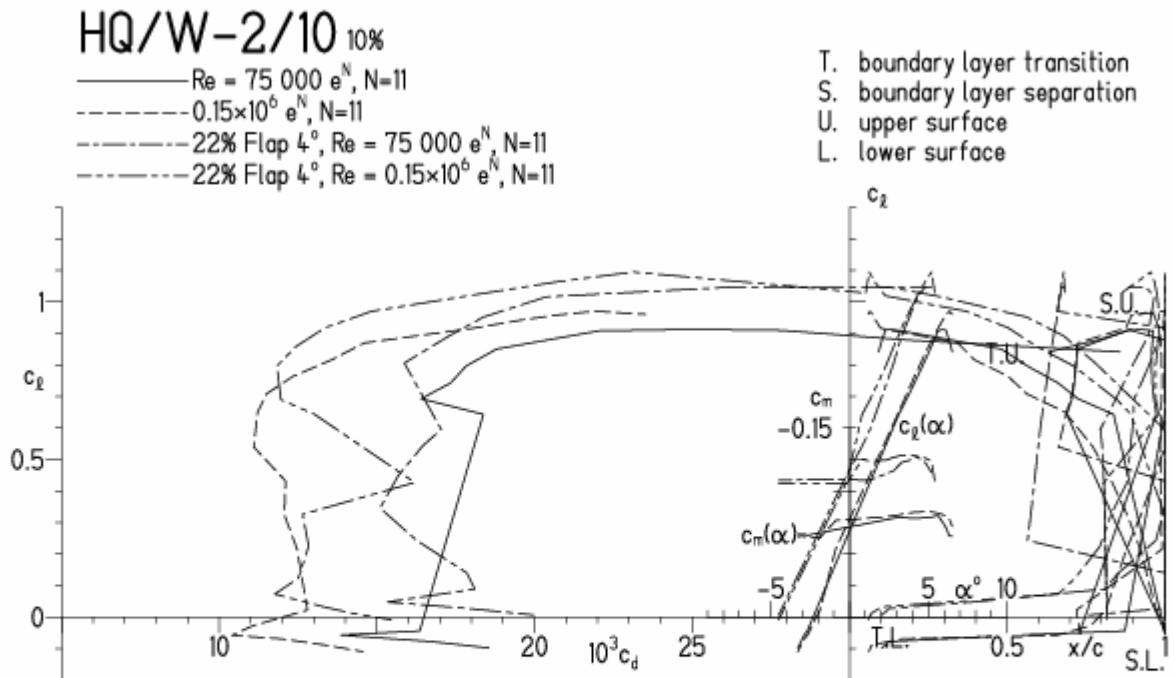


HQ/W-2/10, N=11 mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 7.A.11 16:30

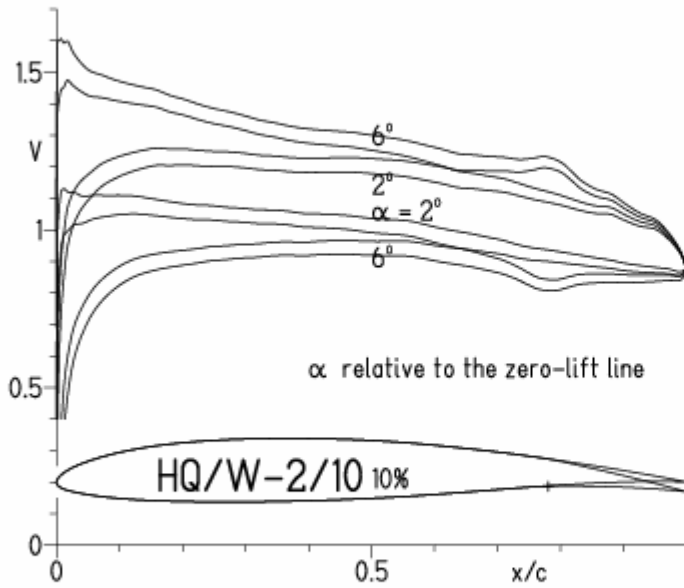


EPPLER 2005 V. 8.5.07 RUN 7.A.11 16:30



HQ/W-2/10, N=9 mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 7.4.11 16:33

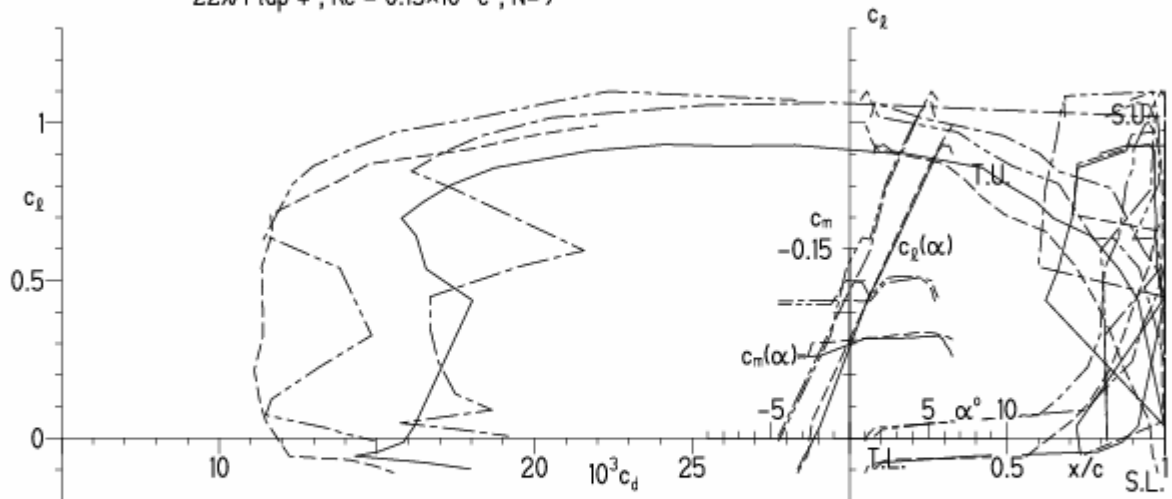


EPPLER 2005 V. 8.

HQ/W-2/10 10%

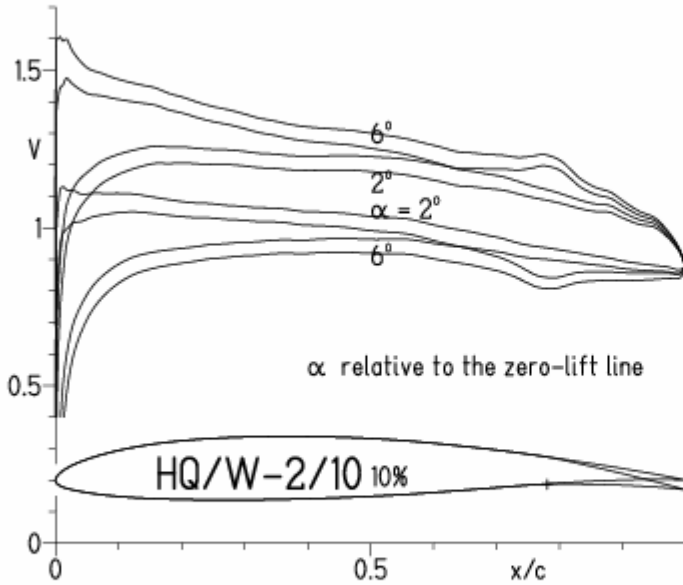
- $Re = 75\,000 e^N, N=9$
- - - $0.15 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 75\,000 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.15 \times 10^6 e^N, N=9$

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



HQ/W-2/10, N=9 mit +4° Wölbklappenausschlag, Turbulatoreffekt
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 7.4.11 16:36

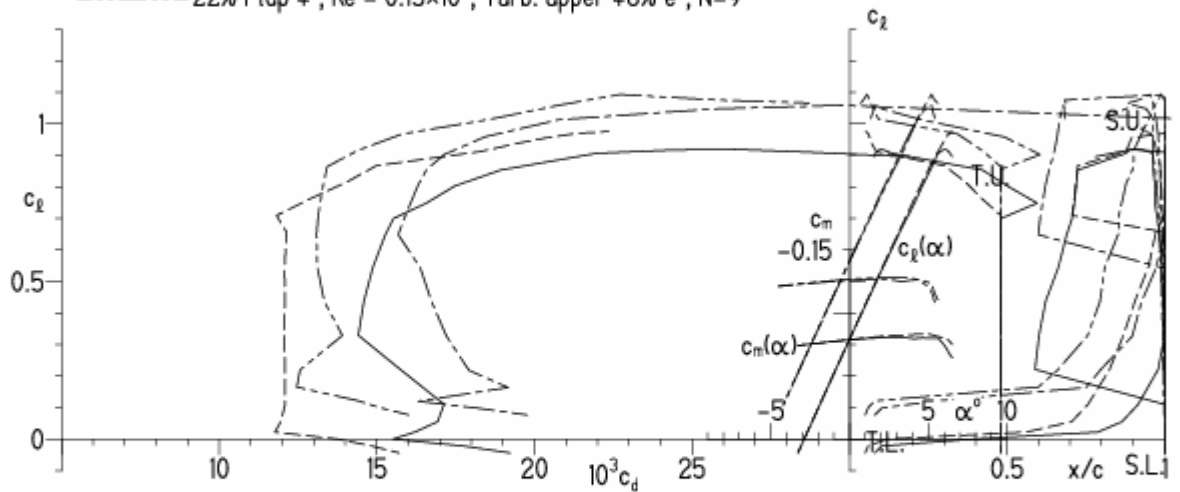


EPPLER 2005 V. 8.5.07 RUN 7.4.11 16:36

HQ/W-2/10 10%

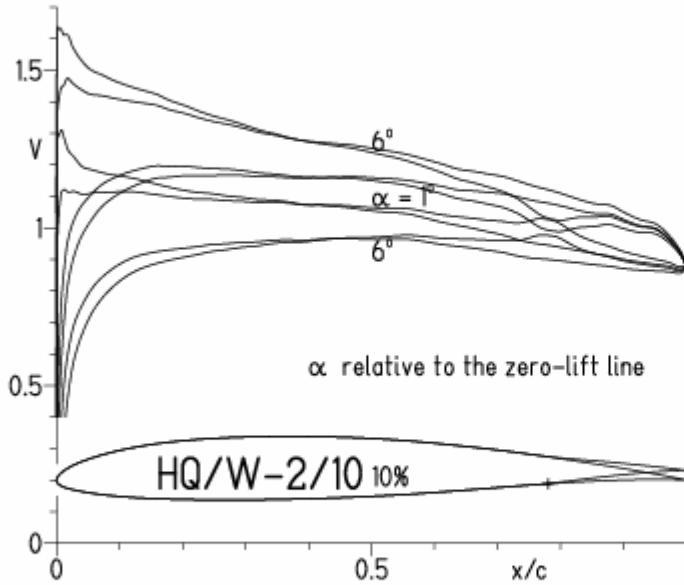
- Re = 75 000, Turb. upper 48% e^N, N=9
- - - 0.15×10⁶, Turb. upper 48% e^N, N=9
- · - 22% Flap 4°, Re = 75 000, Turb. upper 48% e^N, N=9
- · - 22% Flap 4°, Re = 0.15×10⁶, Turb. upper 48% e^N, N=9

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



HQ/W-2/10, N=11 mit -4° Wölbklappenausschlag
 (Segelmodelle mit $> 50 \text{ g/dm}^2$ erreichen damit gut über 300 km/h Höchstgeschwindigkeit)

EPPLER 2005 V. 8.5.07 RUN 7.4.11 16:58



EPPLER 2005 V.

