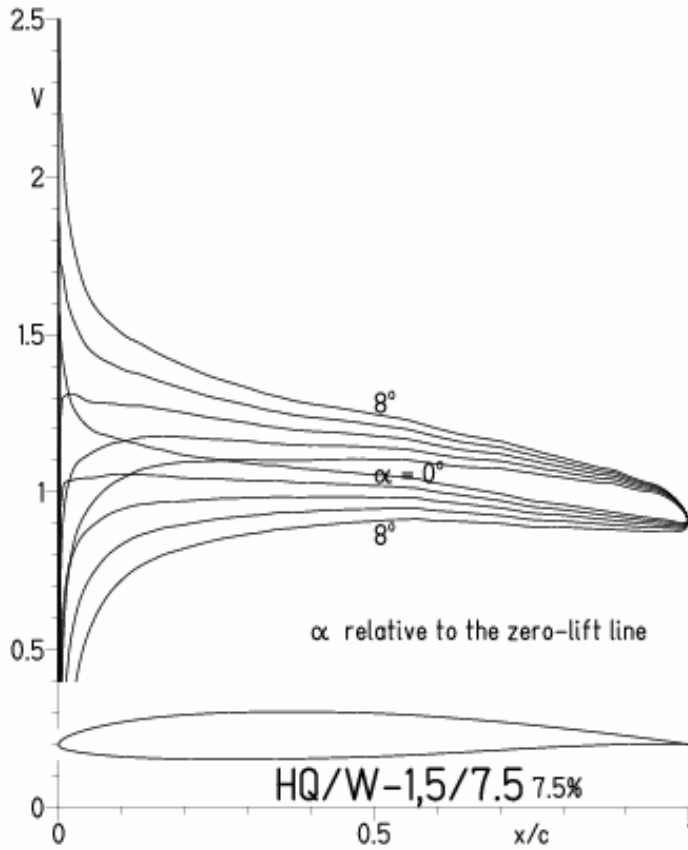


HQ/W-1,5/7,5, N=11

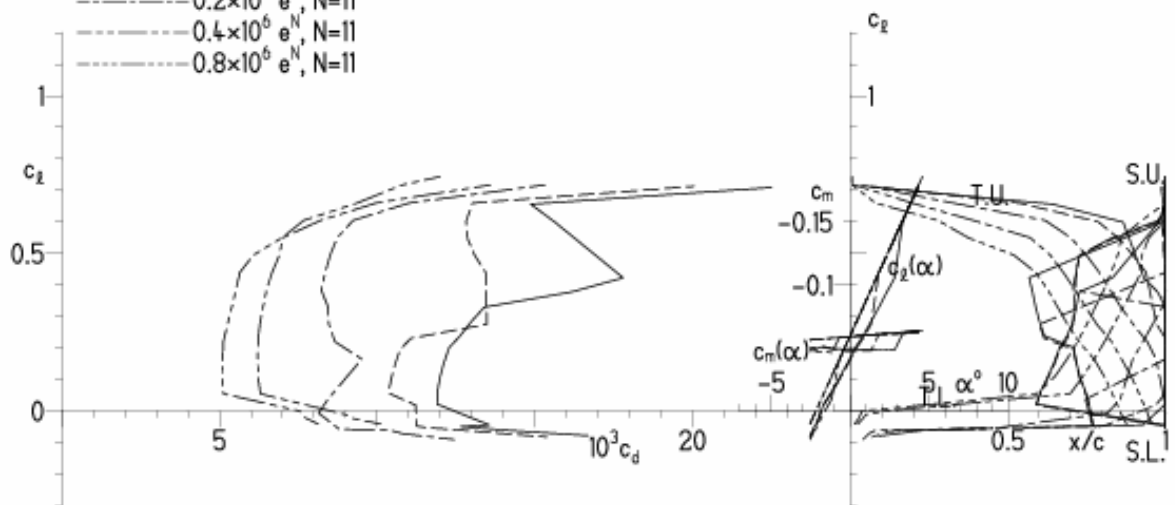
EPPLER 2005 V. 8.5.07 RUN 30.4.11 18:21



EPPLER 2005 V. 8.5.07 RUN 30.4.11 18:21

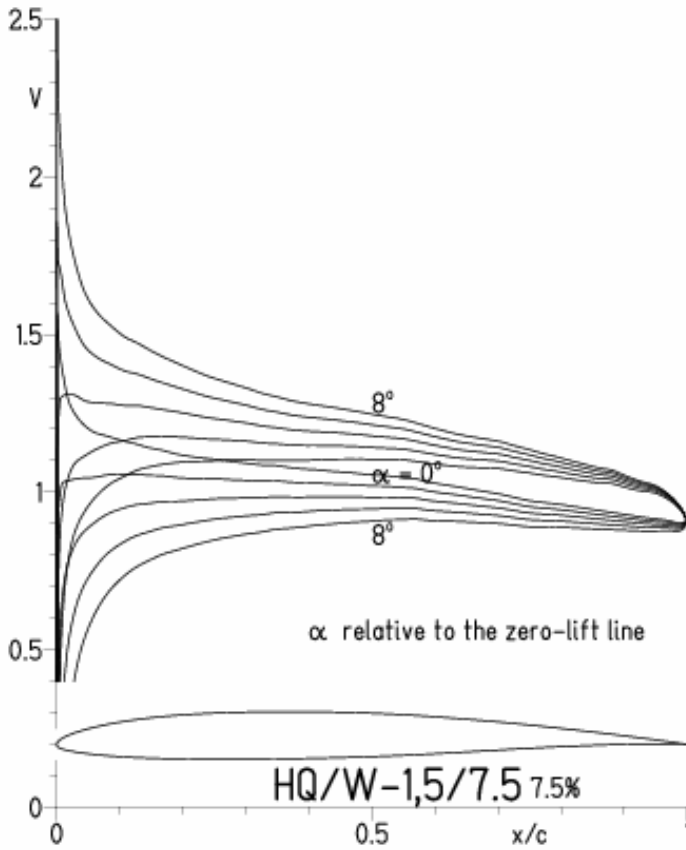
HQ/W-1,5/7,5 7.5%

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



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

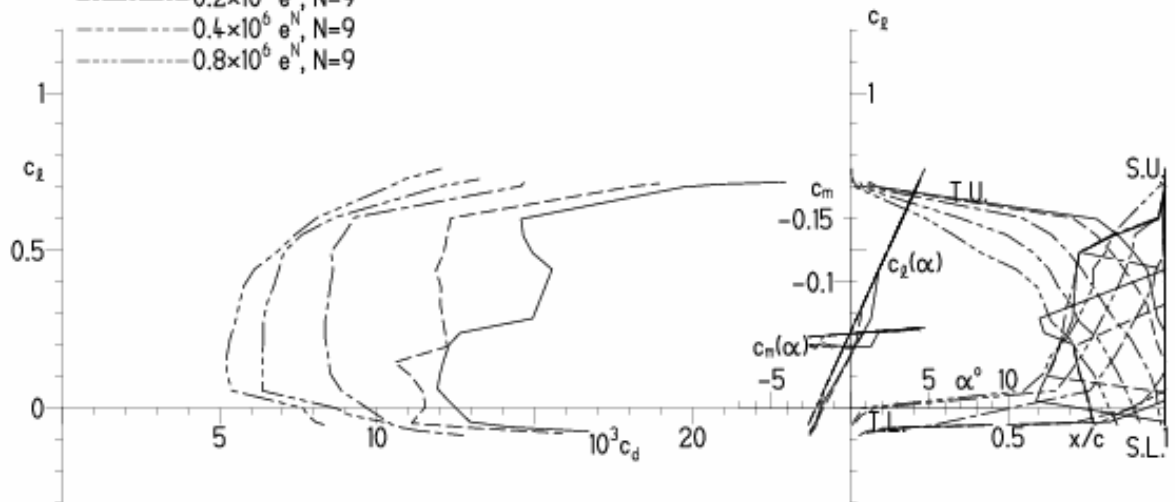
EPPLER 2005 V. 8.5.07 RUN 30.4.11 18:24



EPPLER 2005 V. 8.5.07 RUN 30.4.11 18:24

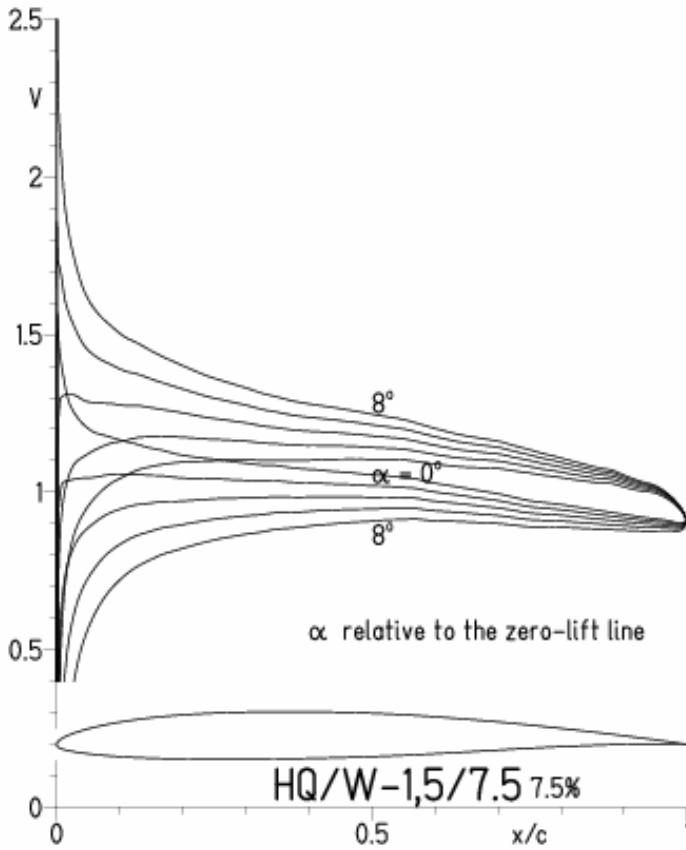
HQ/W-1,5/7,5 7.5%

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



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

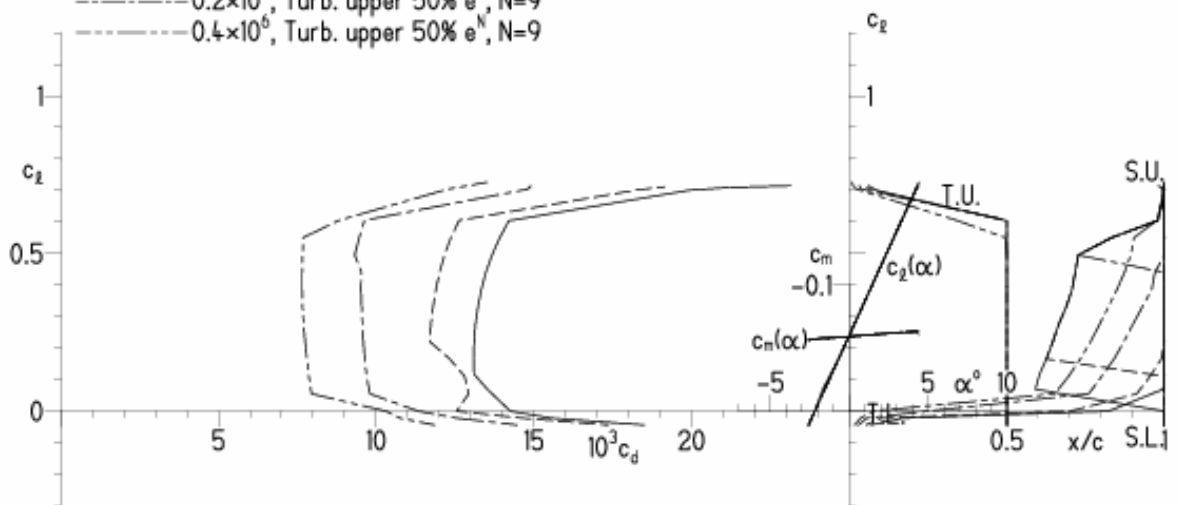
EPPLER 2005 V. 8.5.07 RUN 30.4.11 18:26



EPPLER 2005 V. 8.5.07 RUN 30.4.11 18:26

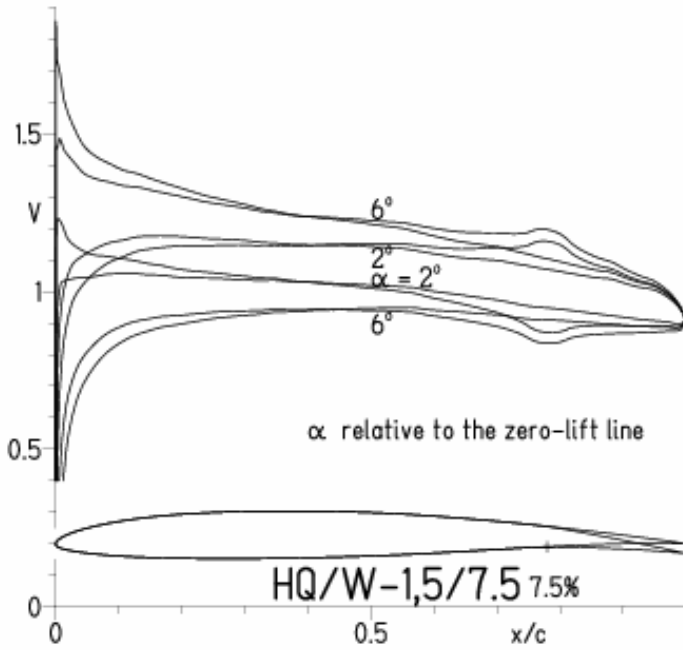
HQ/W-1,5/7,5 7.5%

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



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

EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:44

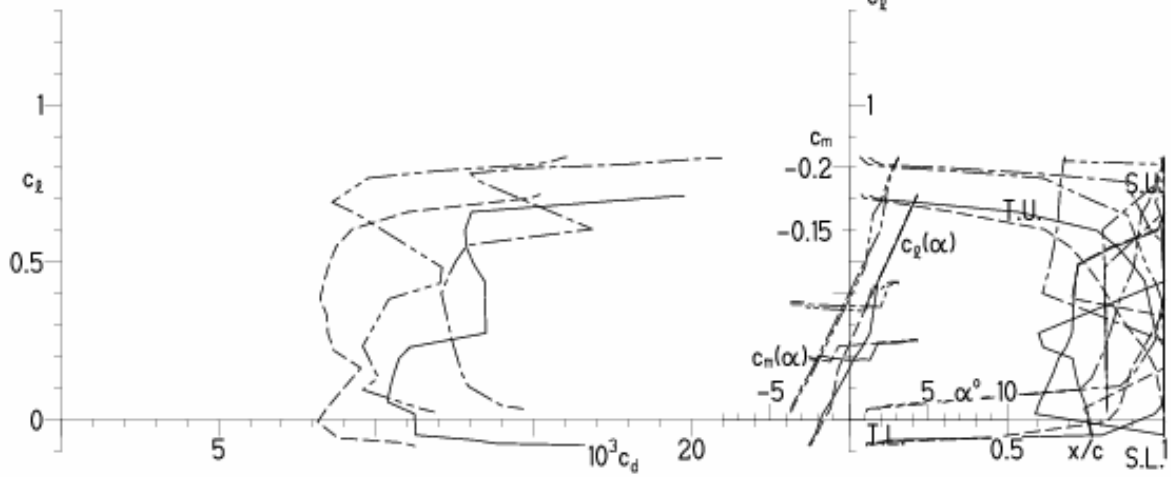


EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:44

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

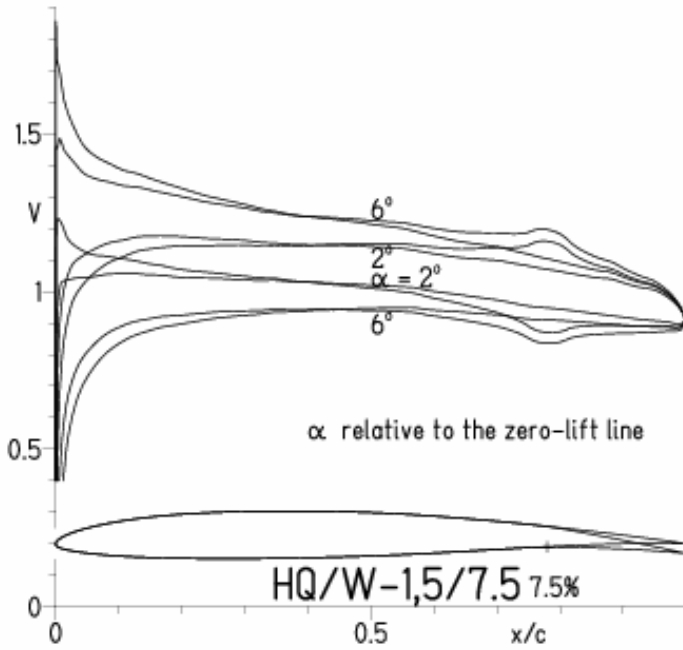
- $Re = 0.1 \times 10^6 e^N, N=11$
- - - $0.2 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=11$

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



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

EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:48

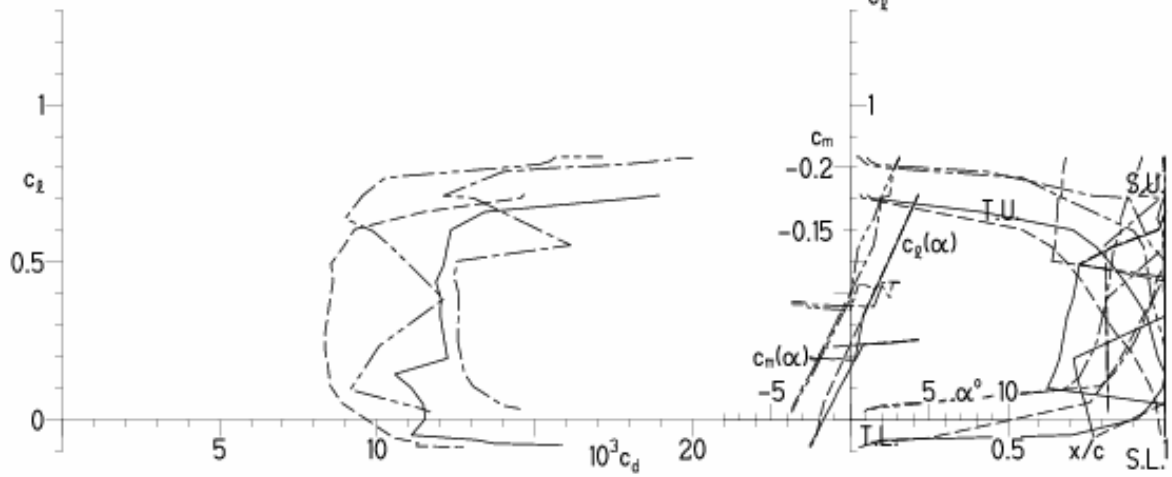


EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:48

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

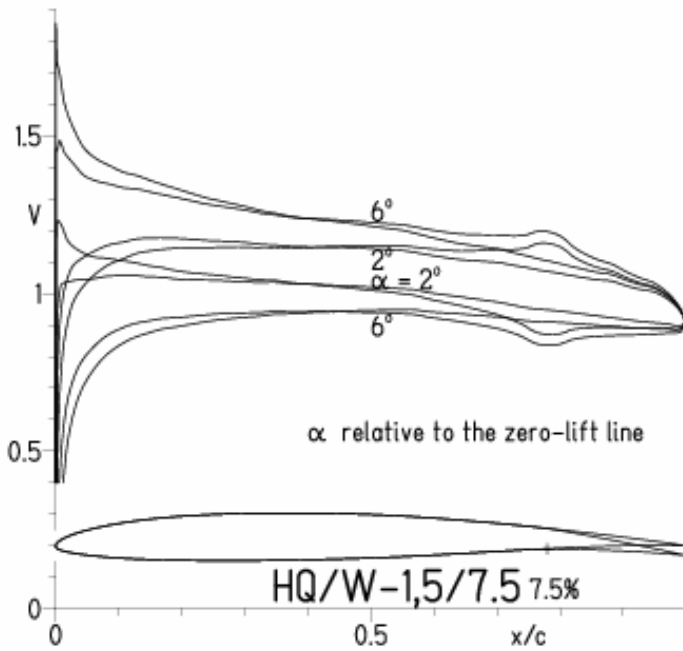
- $Re = 0.1 \times 10^6 e^N, N=9$
- - - $0.2 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=9$

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



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

EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:52

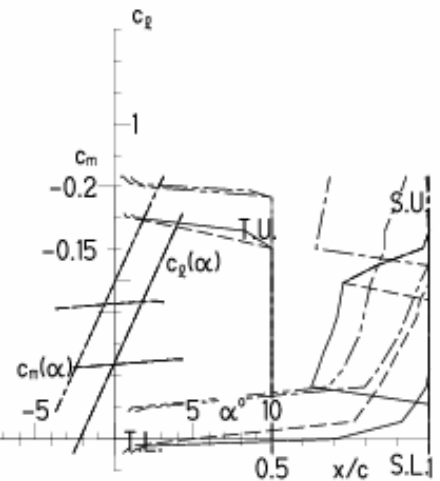
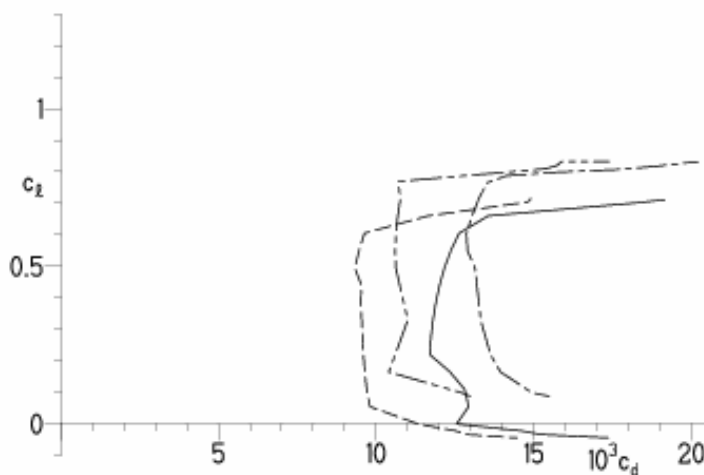


EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:52

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

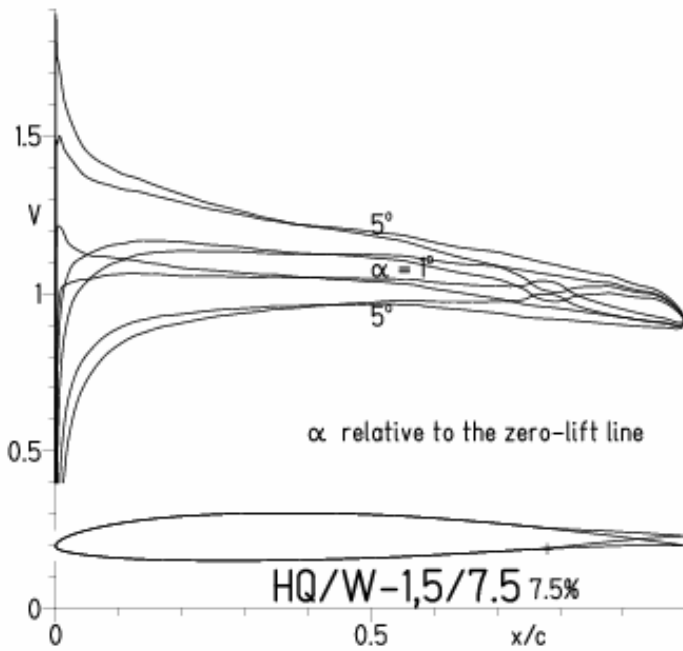
- $Re = 0.1 \times 10^6$, Turb. upper 50% e^N , $N=9$
- - - 0.2×10^6 , Turb. upper 50% e^N , $N=9$
- · · 22% Flap 4° , $Re = 0.1 \times 10^6$, Turb. upper 50% e^N , $N=9$
- · - 22% Flap 4° , $Re = 0.2 \times 10^6$, Turb. upper 50% e^N , $N=9$

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

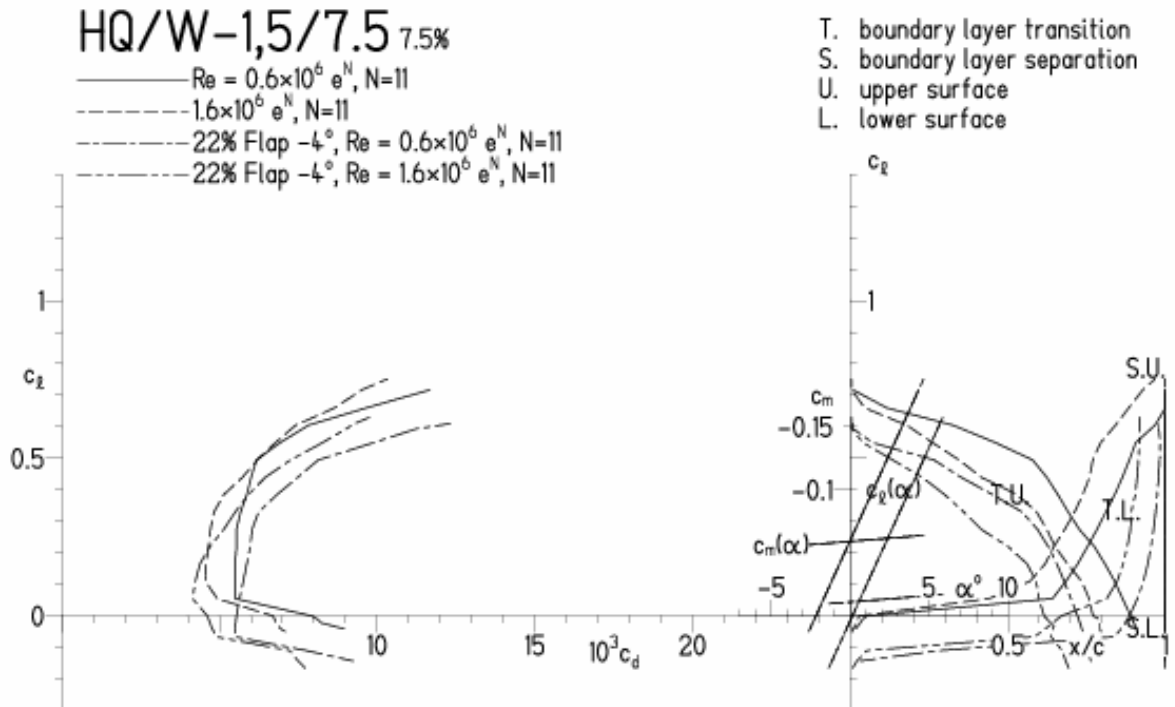


HQ/W-1,5/7,5, N=11, mit -4° Wölbklappenausschlag
 (Segelmodelle mit $> 50 \text{ g/dm}^2$ erreichen damit sicher über 300 km/h Höchstgeschwindigkeit)

EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:58

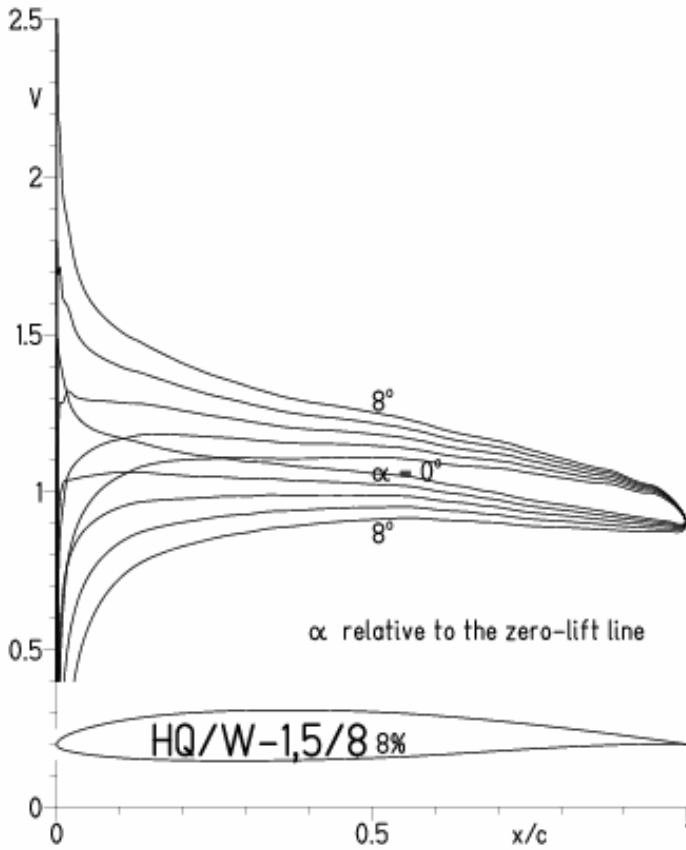


EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:58



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

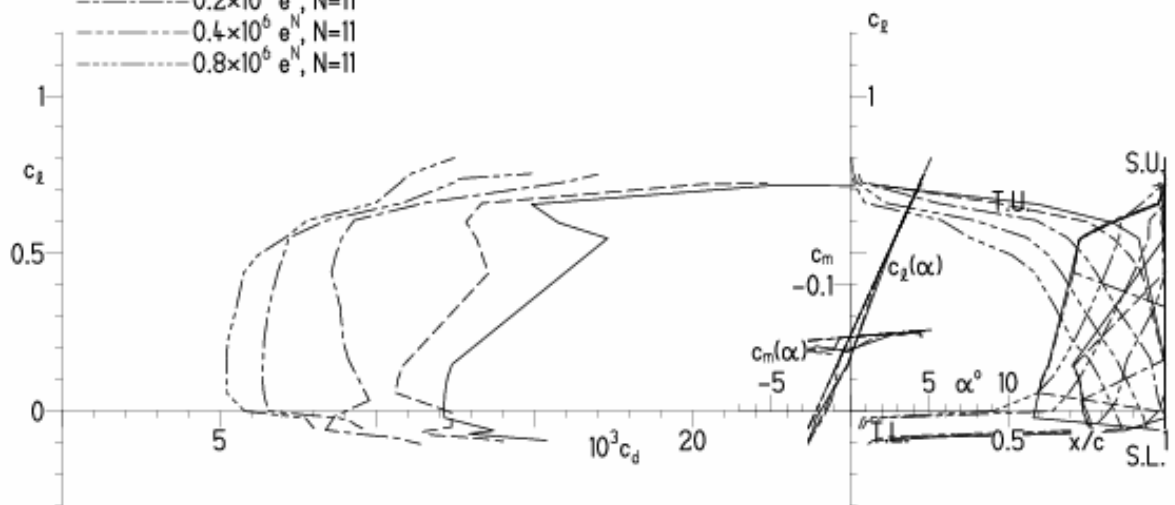
EPPLER 2005 V. 8.5.07 RUN 30.4.11 17:09



EPPLER 2005 V. 8.5.07 RUN 30.4.11 17:09

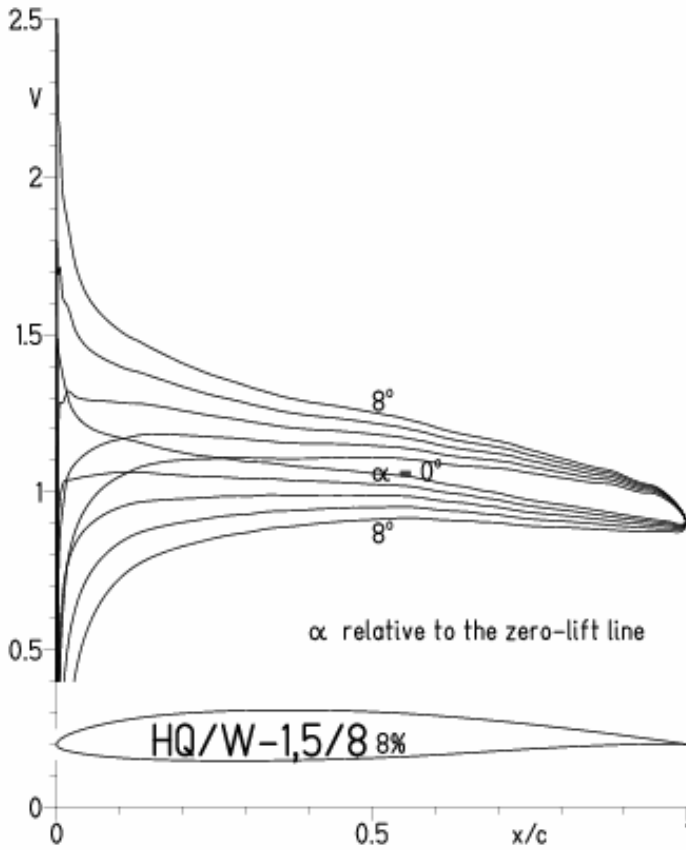
HQ/W-1,5/8 8%

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



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

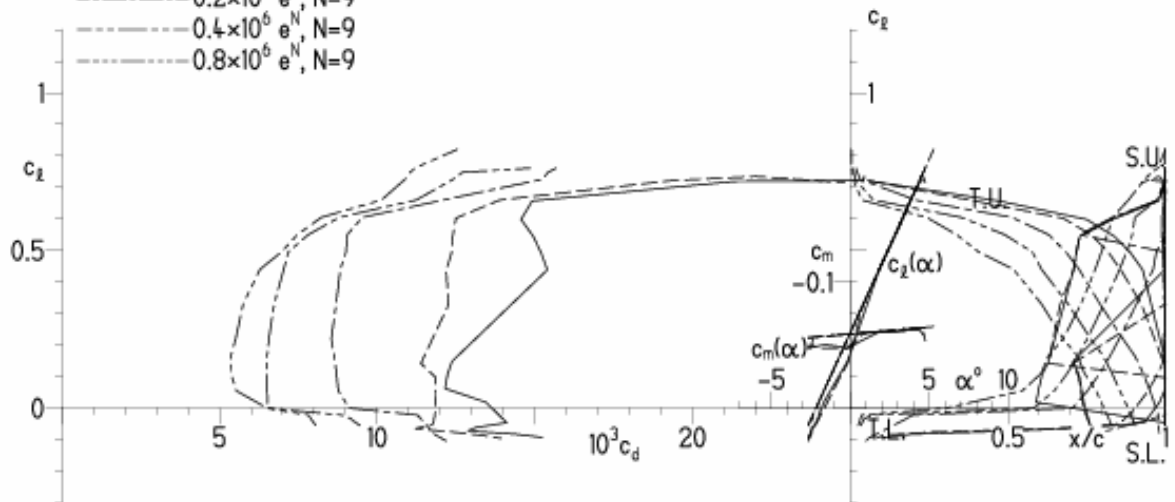
EPPLER 2005 V. 8.5.07 RUN 30.4.11 15:57



EPPLER 2005 V. 8.5.07 RUN 30.4.11 15:57

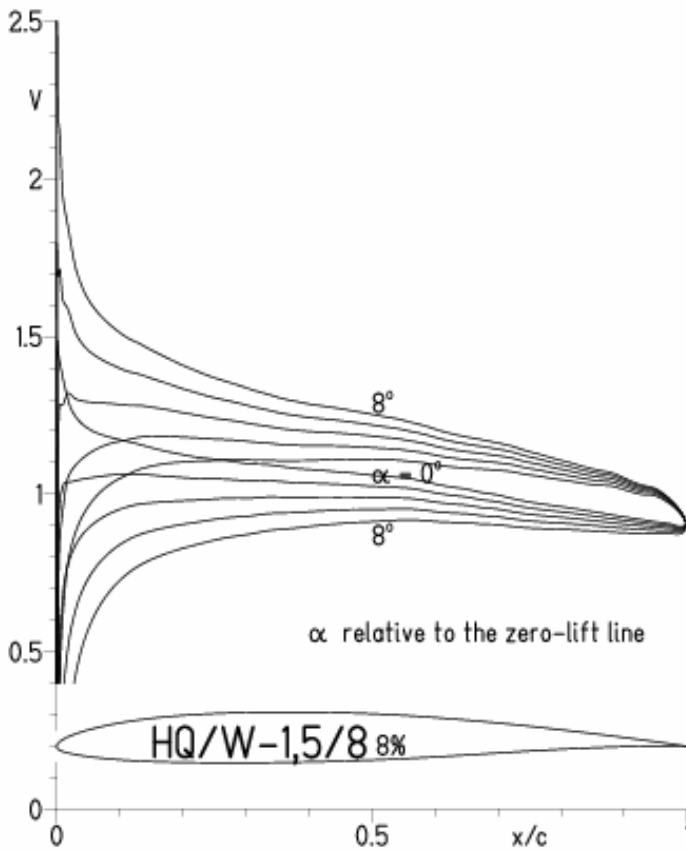
HQ/W-1,5/8 8%

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



HQ/W-1,5/8, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

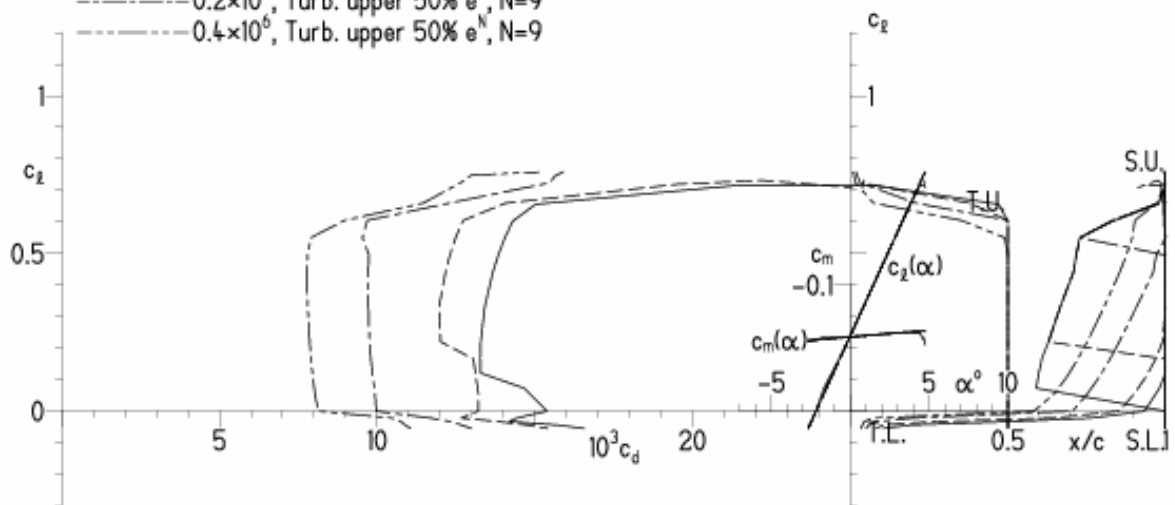
EPPLER 2005 V. 8.5.07 RUN 30.4.11 16:02



EPPLER 2005 V. 8.5.07 RUN 30.4.11 16:02

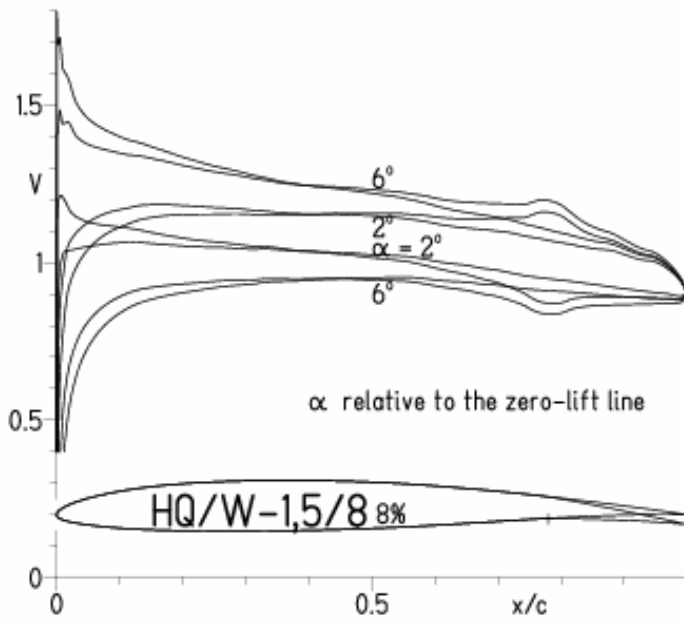
HQ/W-1,5/8 8%

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



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

EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:25

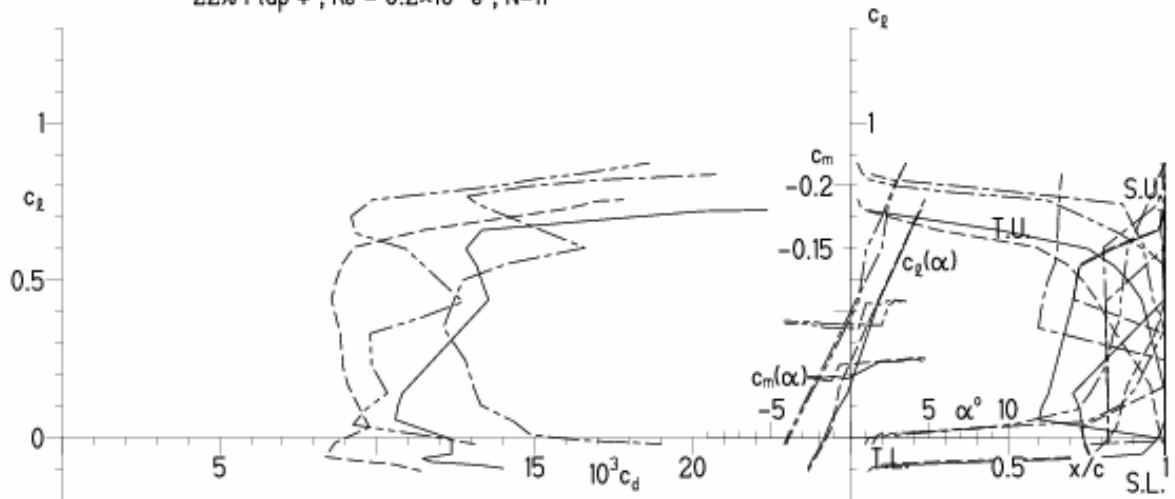


EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:25

HQ/W-1,5/8 8%

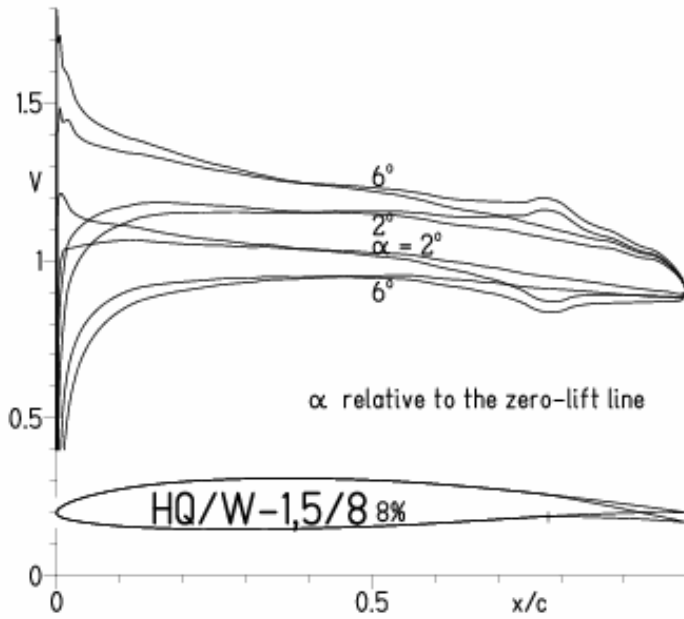
- $Re = 0.1 \times 10^6 e^N, N=11$
- - - $0.2 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=11$

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



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

EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:30

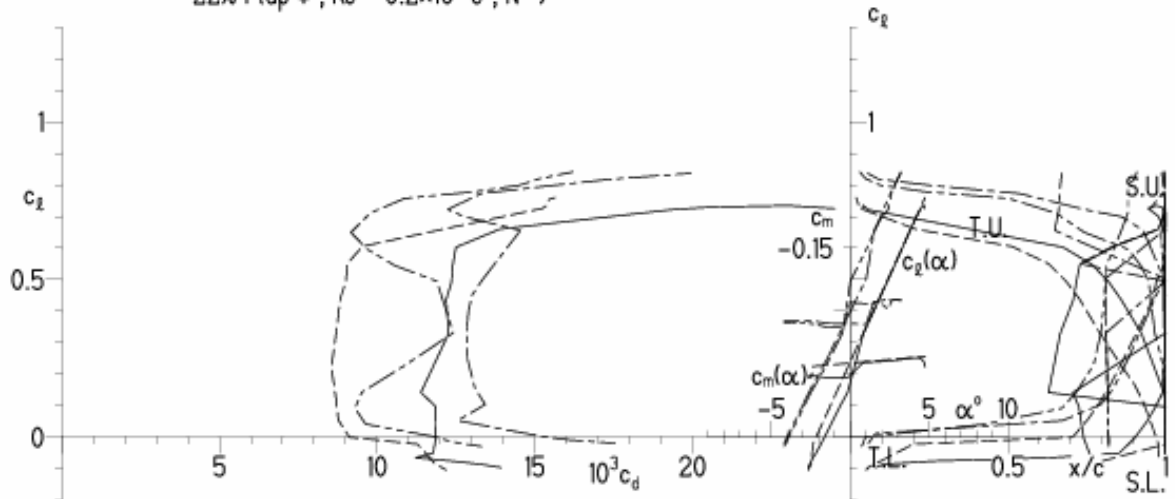


EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:30

HQ/W-1,5/8 8%

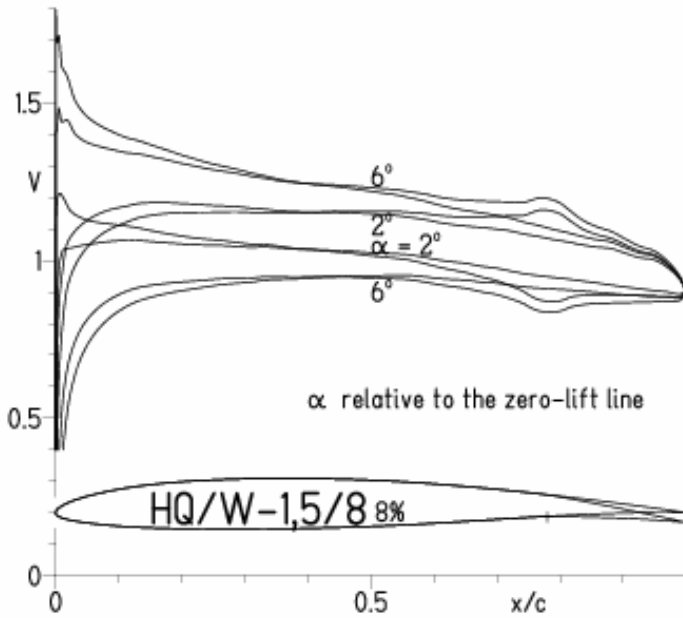
- $Re = 0.1 \times 10^6 e^N, N=9$
- - - $0.2 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=9$

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



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

EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:35

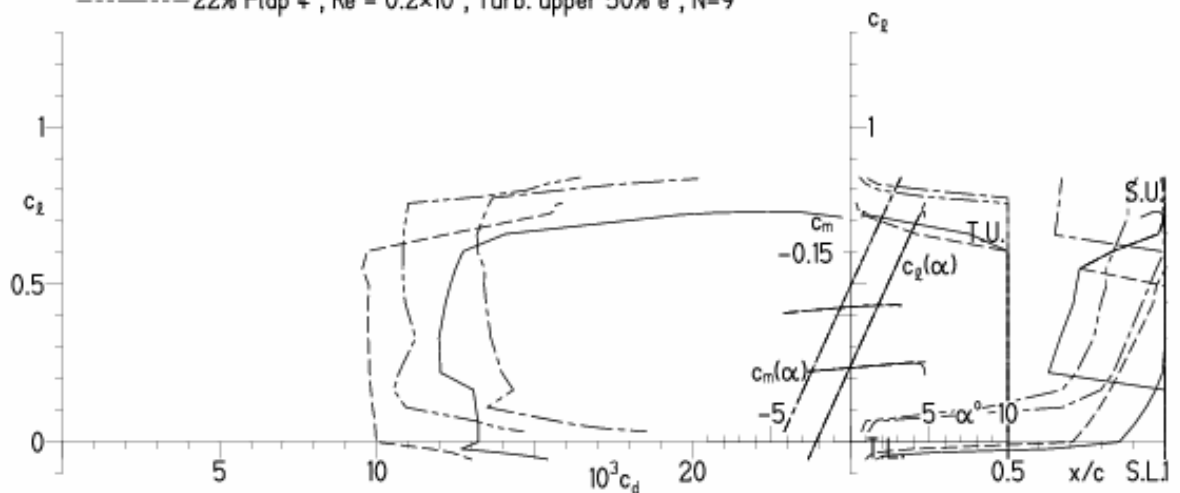


EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:35

HQ/W-1,5/8 8%

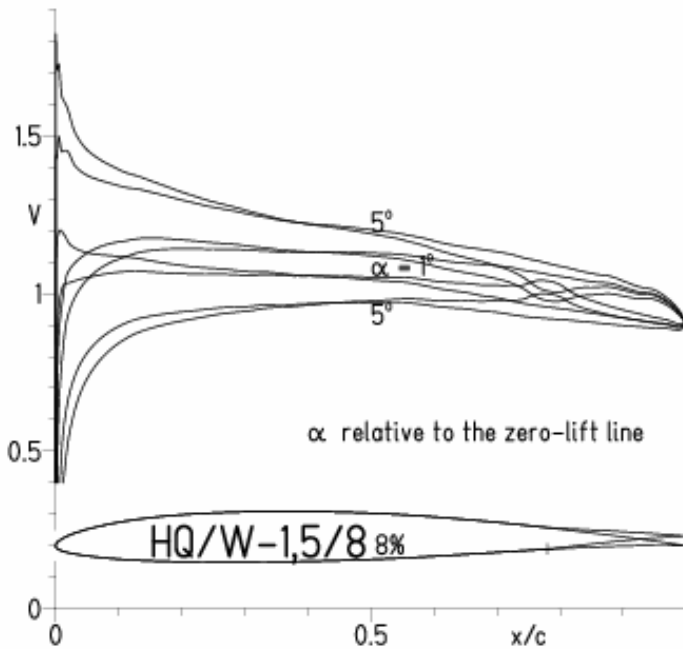
- $Re = 0.1 \times 10^6$, Turb. upper 50% e^N , $N=9$
- - - 0.2×10^6 , Turb. upper 50% e^N , $N=9$
- · - · 22% Flap 4° , $Re = 0.1 \times 10^6$, Turb. upper 50% e^N , $N=9$
- · - · 22% Flap 4° , $Re = 0.2 \times 10^6$, Turb. upper 50% e^N , $N=9$

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



HQ/W-1,5/8, N=11, mit -4° Wölbklappenausschlag
 (Segelmodelle mit > 50 g/dm² erreichen damit sicher über 300 km/h Höchstgeschwindigkeit)

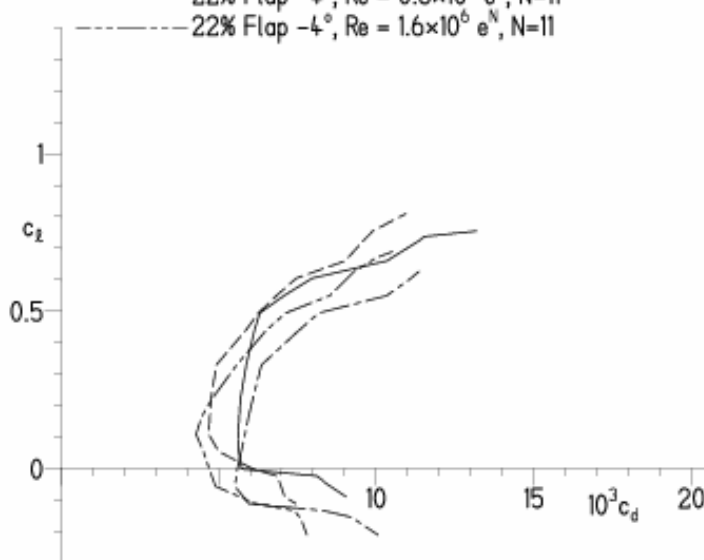
EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:40



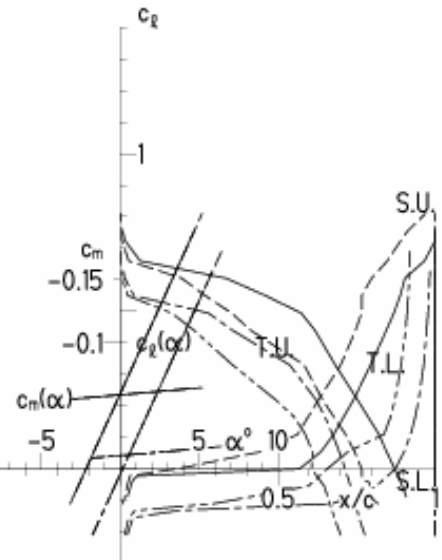
EPPLER 2005 V. 8.5.07 RUN 5.5.11 18:40

HQ/W-1,5/8 8%

- Re = 0.6 × 10⁶ e^N, N=11
- - - 1.6 × 10⁶ e^N, N=11
- · - 22% Flap -4°, Re = 0.6 × 10⁶ e^N, N=11
- · - 22% Flap -4°, Re = 1.6 × 10⁶ e^N, N=11

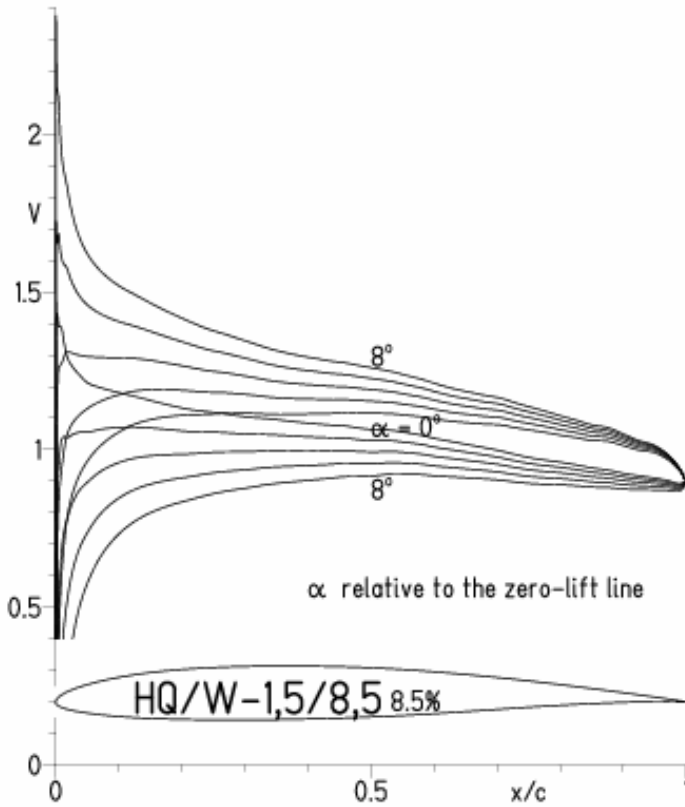


- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



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

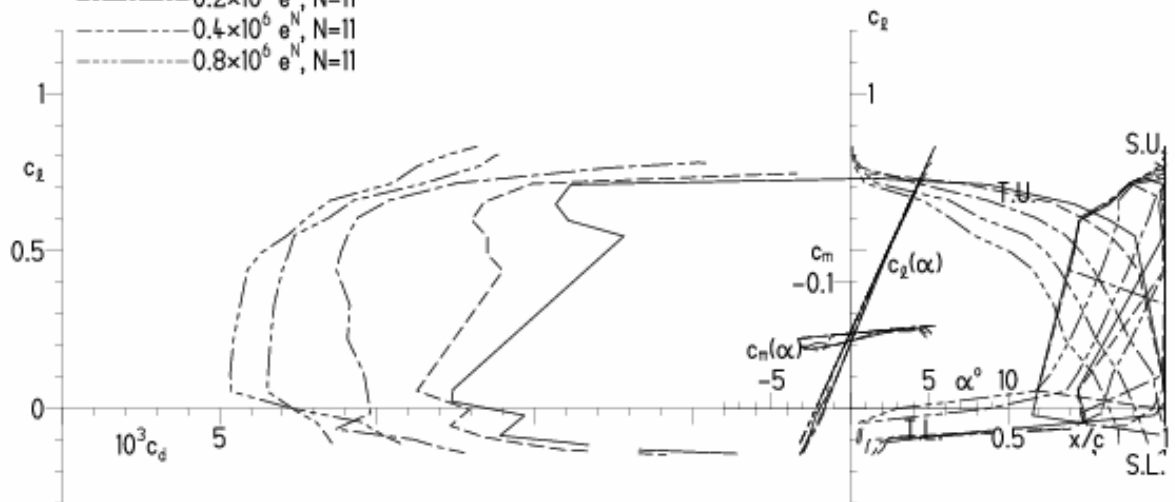
EPPLER 2005 V. 8.5.07 RUN 15.11 11:41



EPPLER 2005 V. 8.5.07 RUN 15.11 11:41

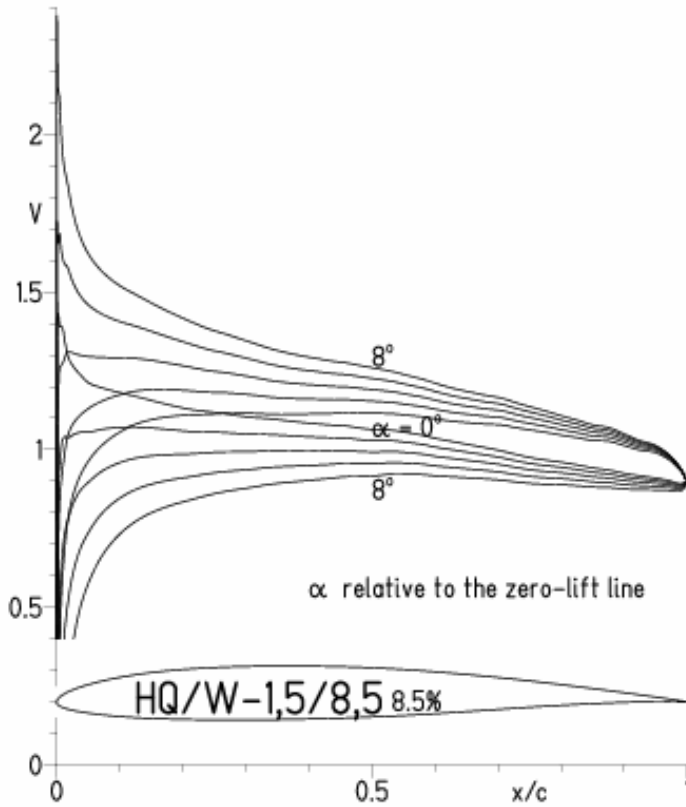
HQ/W-1,5/8,5 8.5%

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



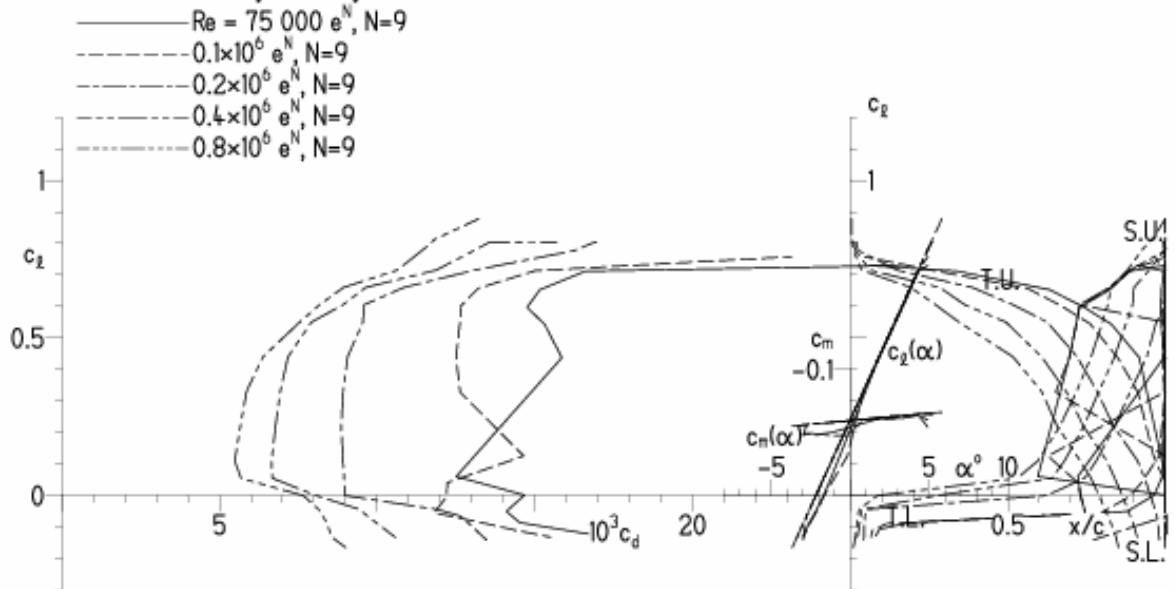
HQ/W-1,5/8,5, N=9

EPPLER 2005 V. 8.5.07 RUN 15.11 11:59



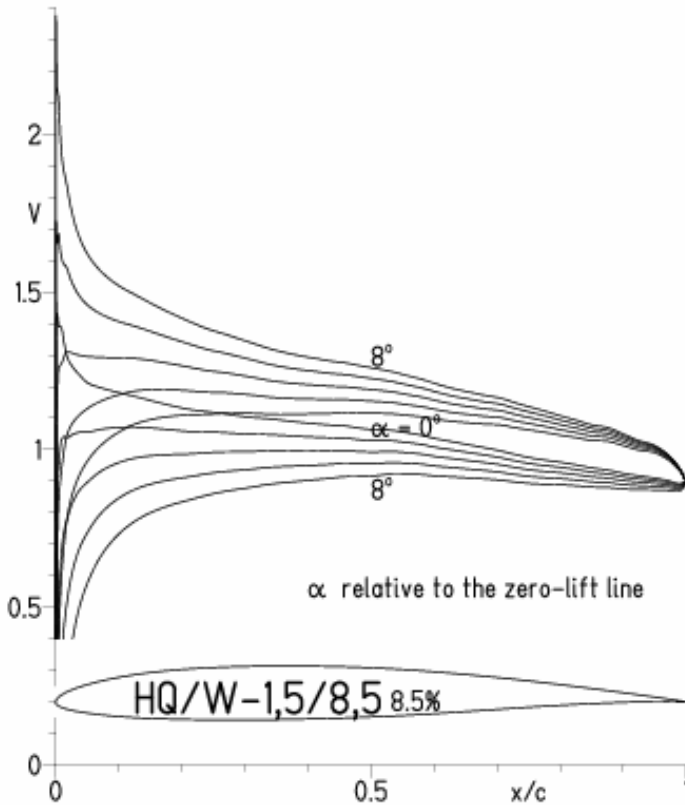
EPPLER 2005 V. 8.5.07 RUN 15.11 11:59

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



HQ/W-1,5/8,5, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

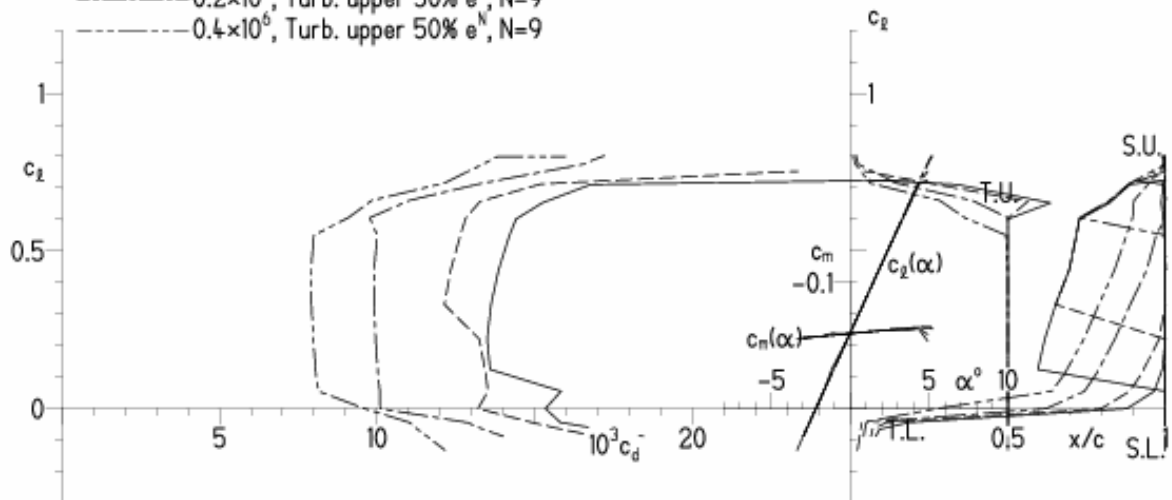
EPPLER 2005 V. 8.5.07 RUN 15.11 12:03



EPPLER 2005 V. 8.5.07 RUN 15.11 12:03

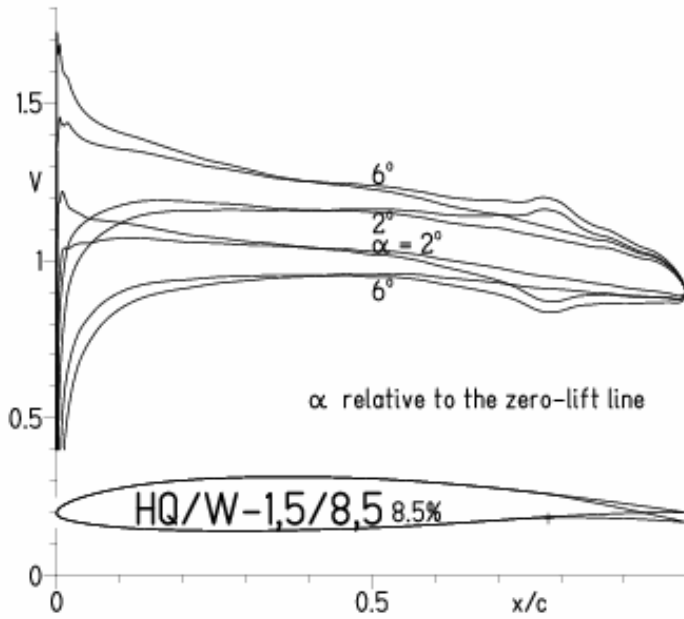
HQ/W-1,5/8,5 8.5%

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



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

EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:03

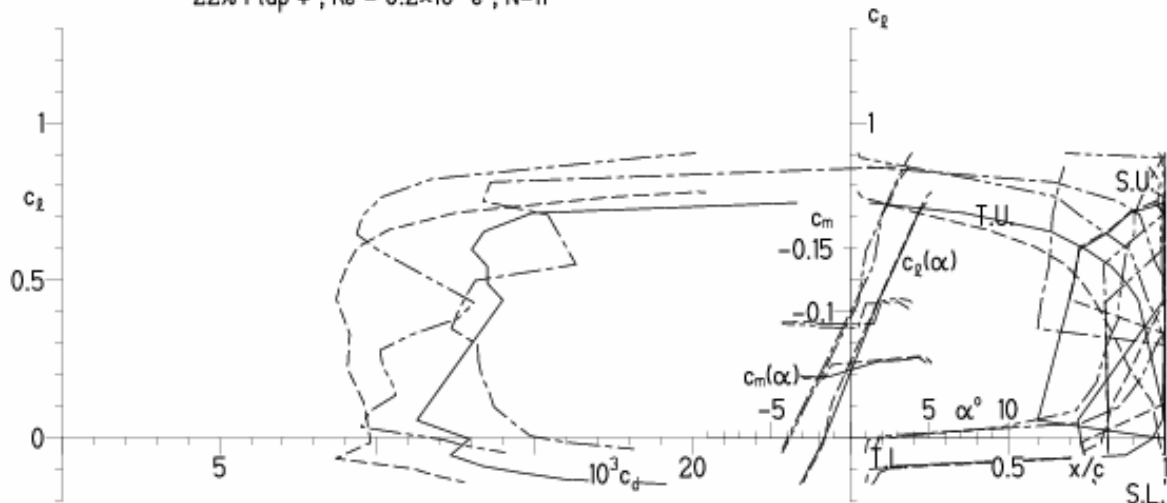


EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:03

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

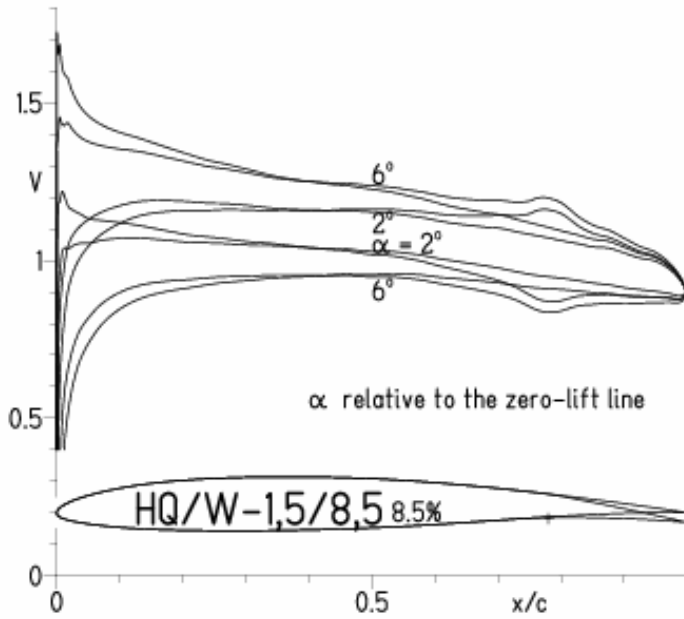
- $Re = 0.1 \times 10^6 e^N, N=11$
- - - $0.2 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=11$

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



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

EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:07

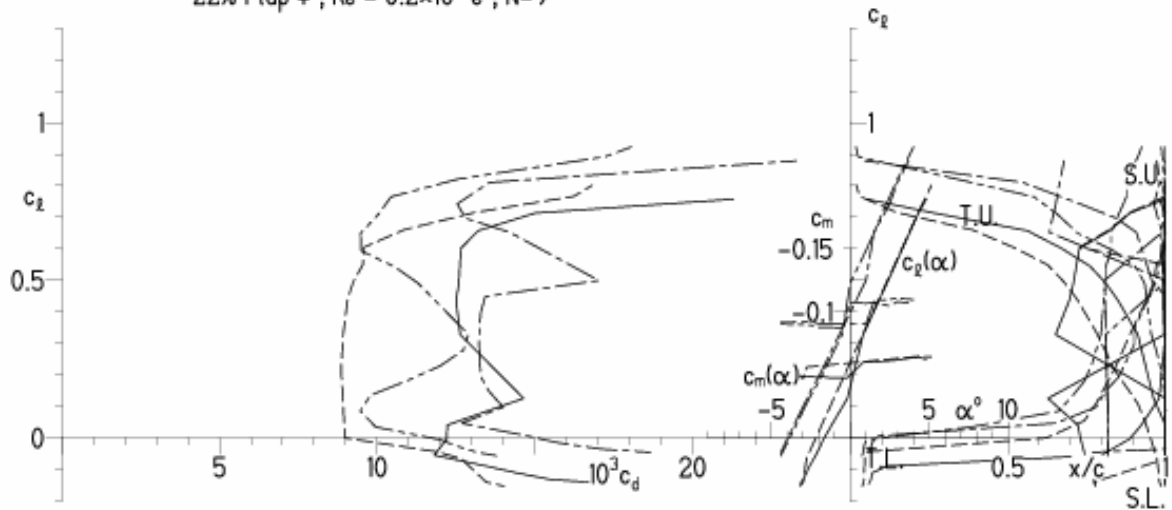


EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:07

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

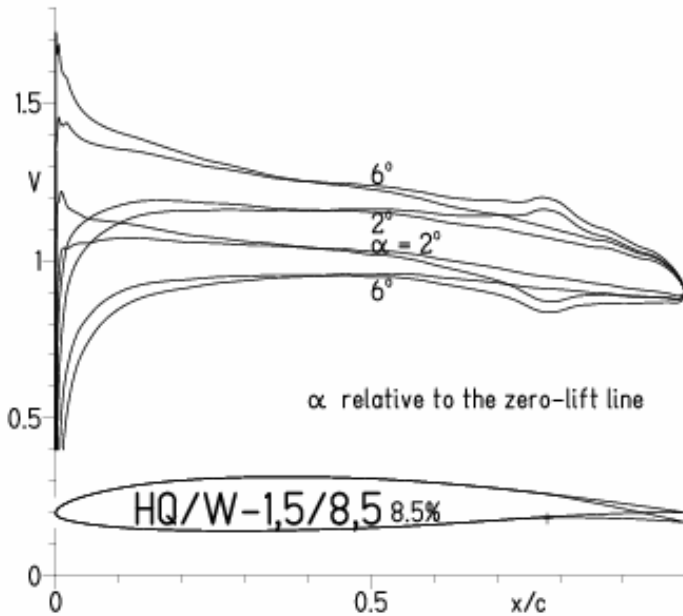
- $Re = 0.1 \times 10^6 e^N, N=9$
- - - $0.2 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=9$

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



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

EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:10

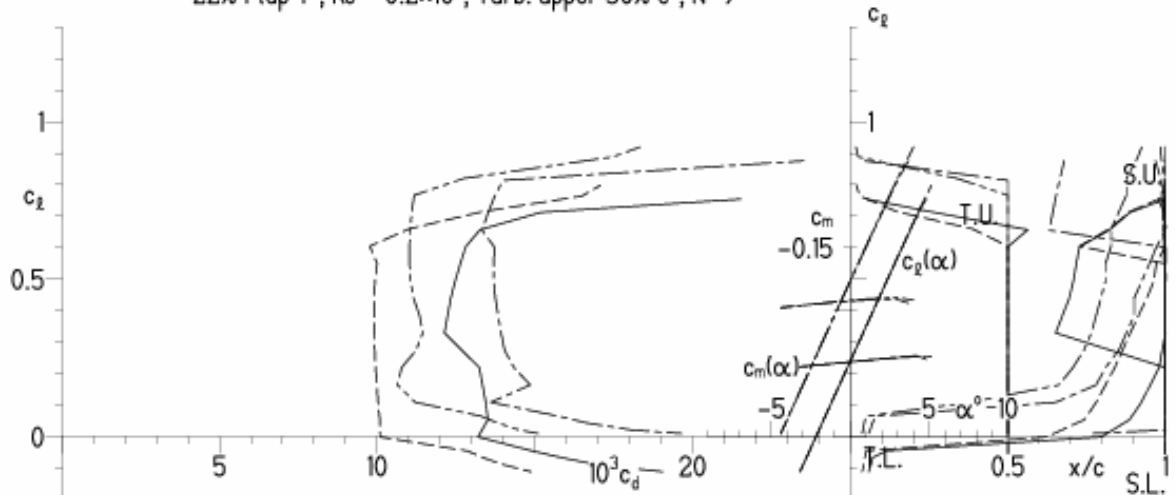


EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:10

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

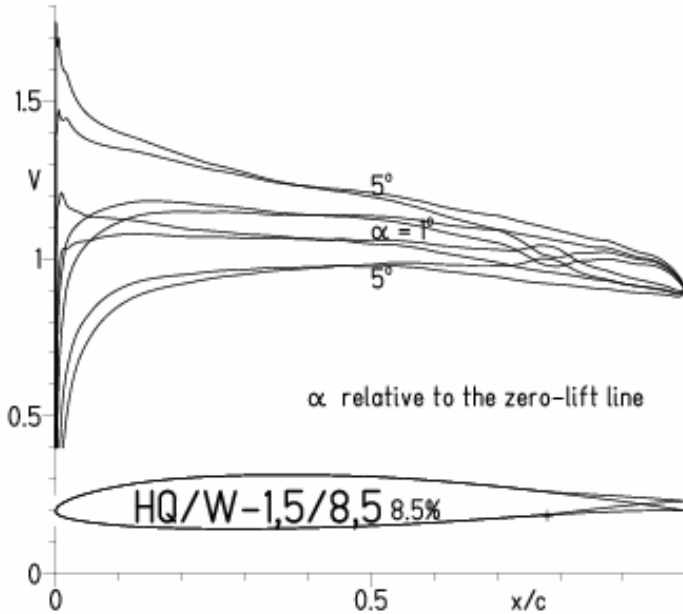
- $Re = 0.1 \times 10^6$, Turb. upper 50% e^N , $N=9$
- - - 0.2×10^6 , Turb. upper 50% e^N , $N=9$
- · - · 22% Flap 4° , $Re = 0.1 \times 10^6$, Turb. upper 50% e^N , $N=9$
- · - · 22% Flap 4° , $Re = 0.2 \times 10^6$, Turb. upper 50% e^N , $N=9$

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



HQ/W-1,5/8,5, N=11, mit -4° Wölbklappenausschlag
 (Segelflugmodelle mit > 50 g/dm² erreichen damit gut über 300 km/h Höchstgeschwindigkeit)

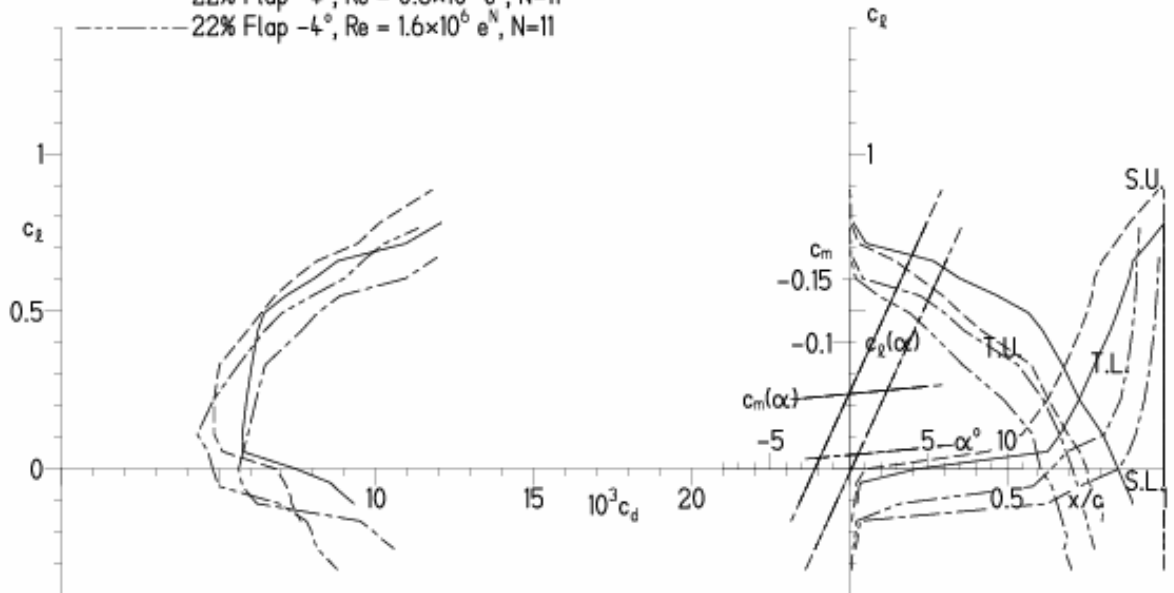
EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:13



EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:13

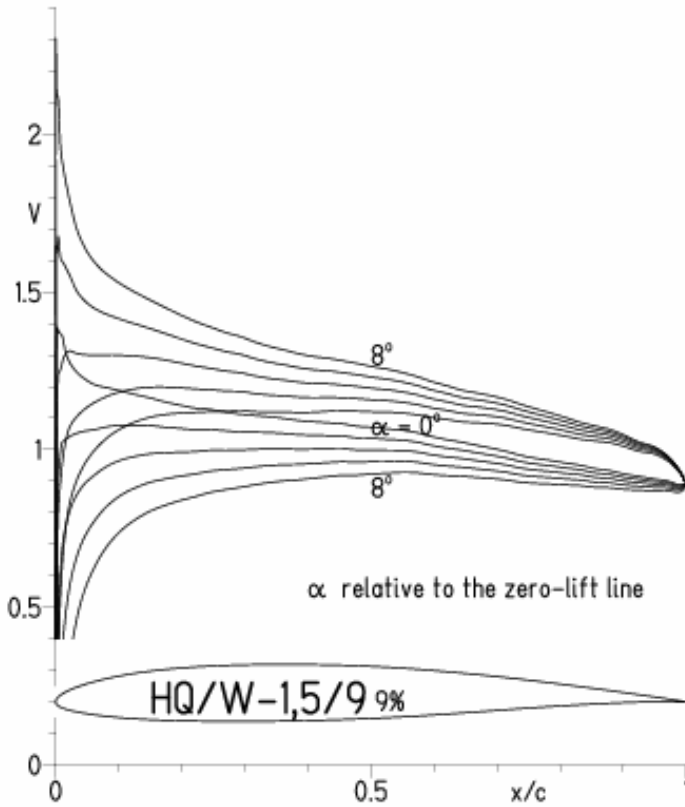
HQ/W-1,5/8,5 8.5%

- $Re = 0.6 \times 10^6 e^N, N=11$
- - - $1.6 \times 10^6 e^N, N=11$
- · - · 22% Flap -4°, $Re = 0.6 \times 10^6 e^N, N=11$
- · - · 22% Flap -4°, $Re = 1.6 \times 10^6 e^N, N=11$



HQ/W-1,5/9, N=11

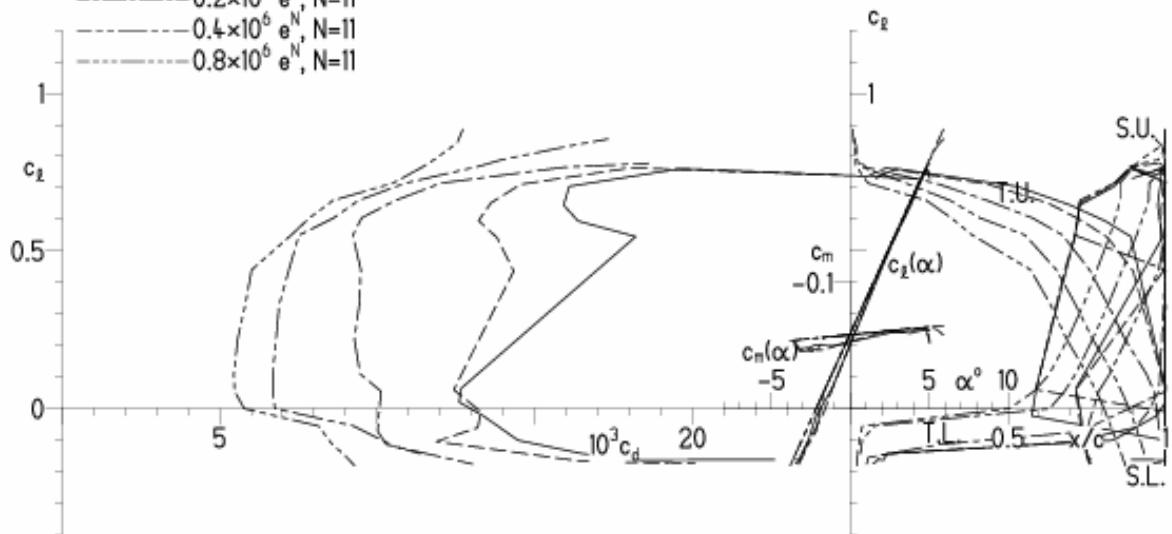
EPPLER 2005 V. 8.5.07 RUN 2.5.11 11:45



EPPLER 2005 V. 8.5.07 RUN 2.5.11 11:45

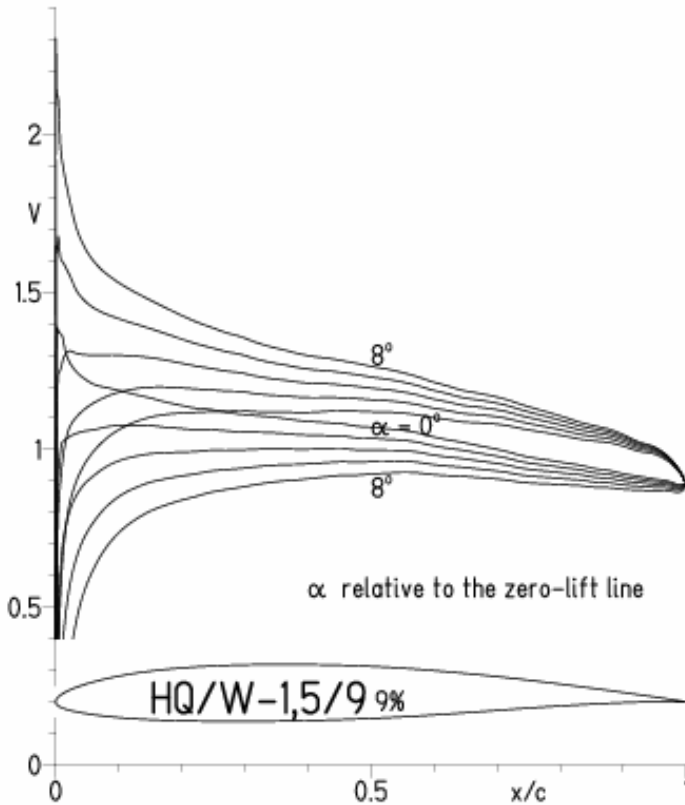
HQ/W-1,5/9 9%

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



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

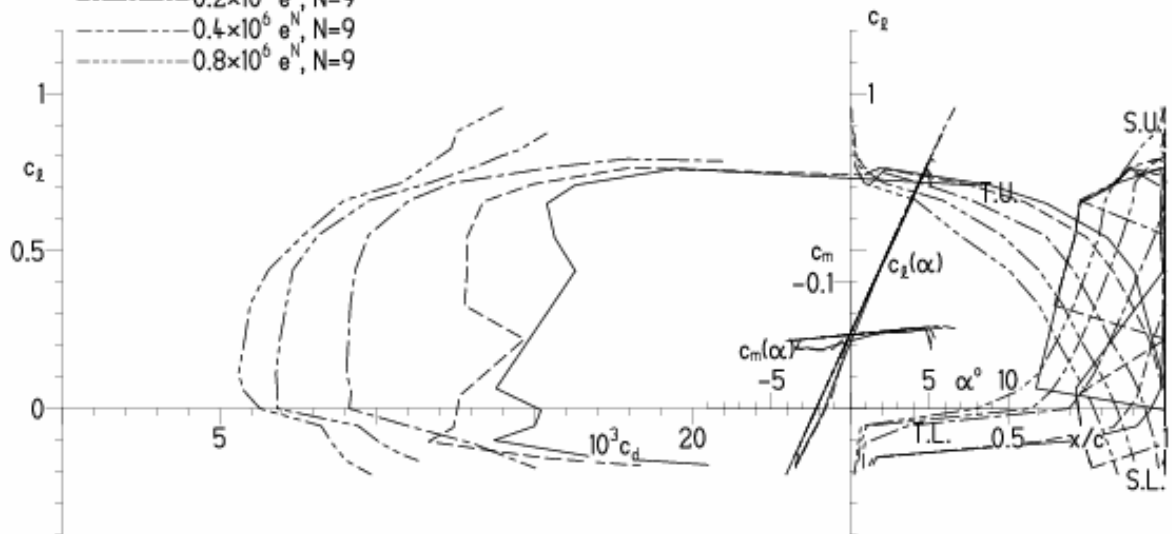
EPPLER 2005 V. 8.5.07 RUN 2.5.11 12:17



EPPLER 2005 V. 8.5.07 RUN 2.5.11 12:17

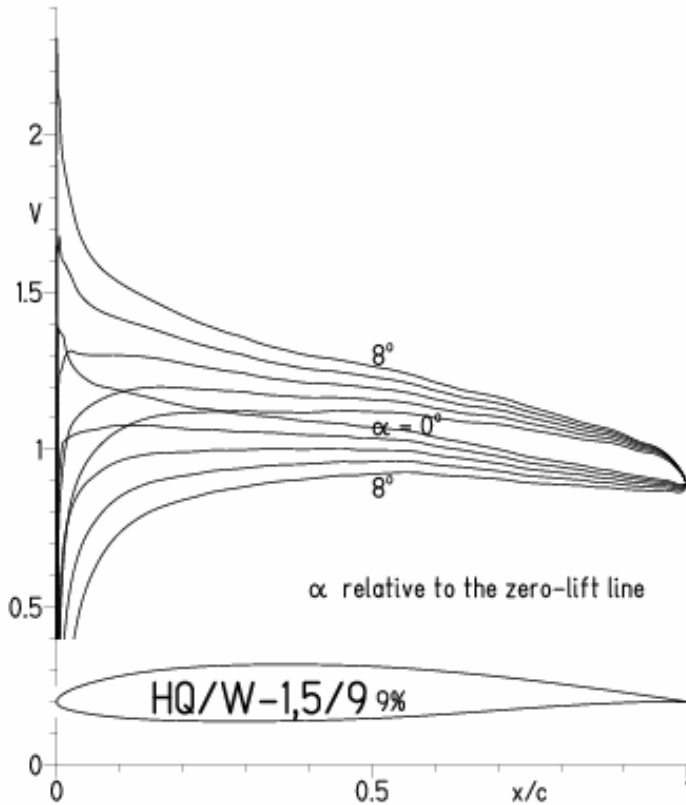
HQ/W-1,5/9 9%

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



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

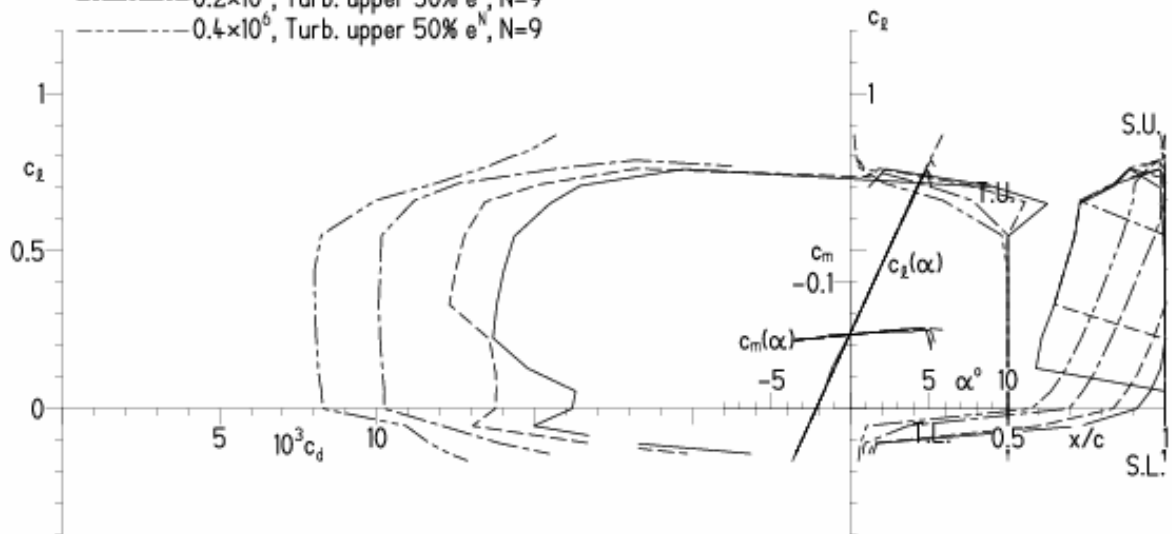
EPPLER 2005 V. 8.5.07 RUN 2.5.11 12:21



EPPLER 2005 V. 8.5.07 RUN 2.5.11 12:21

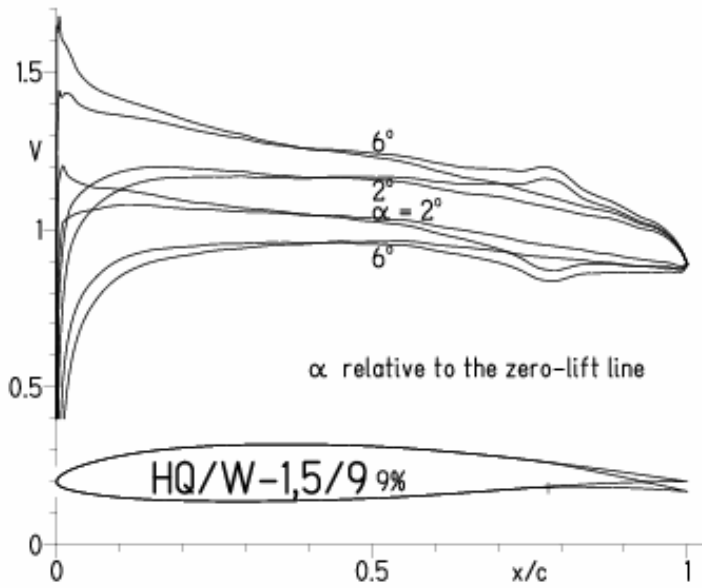
HQ/W-1,5/9 9%

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



HQ/W-1,5/9, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:53

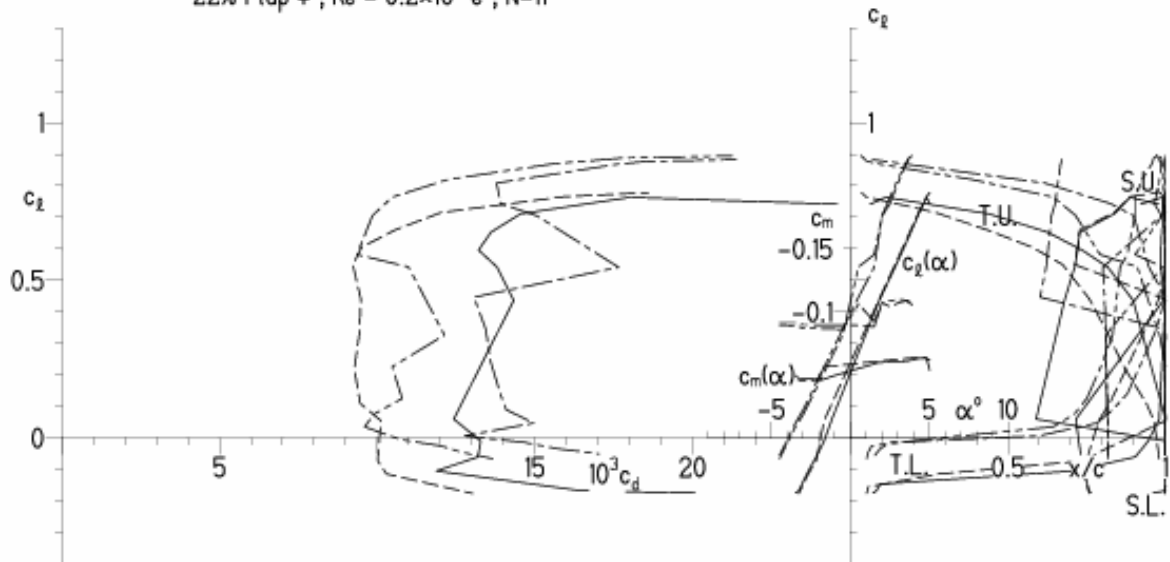


EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:5

HQ/W-1,5/9 9%

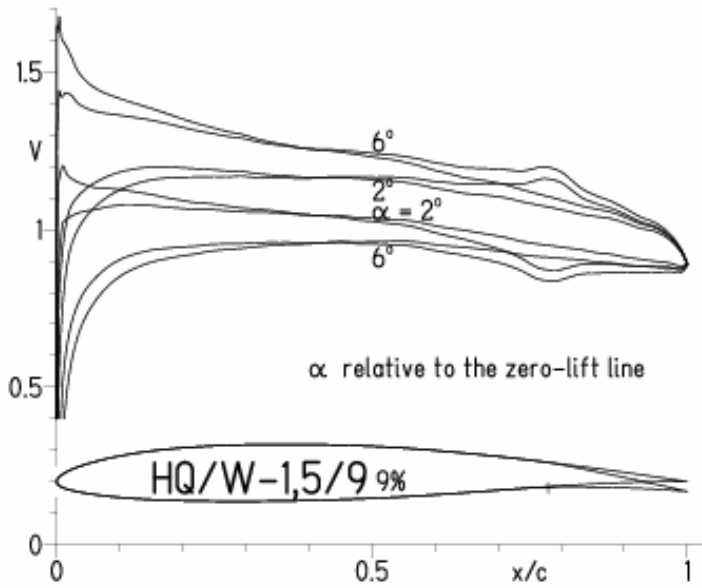
- $Re = 0.1 \times 10^6 e^N, N=11$
- - - $0.2 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=11$

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



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

EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:56

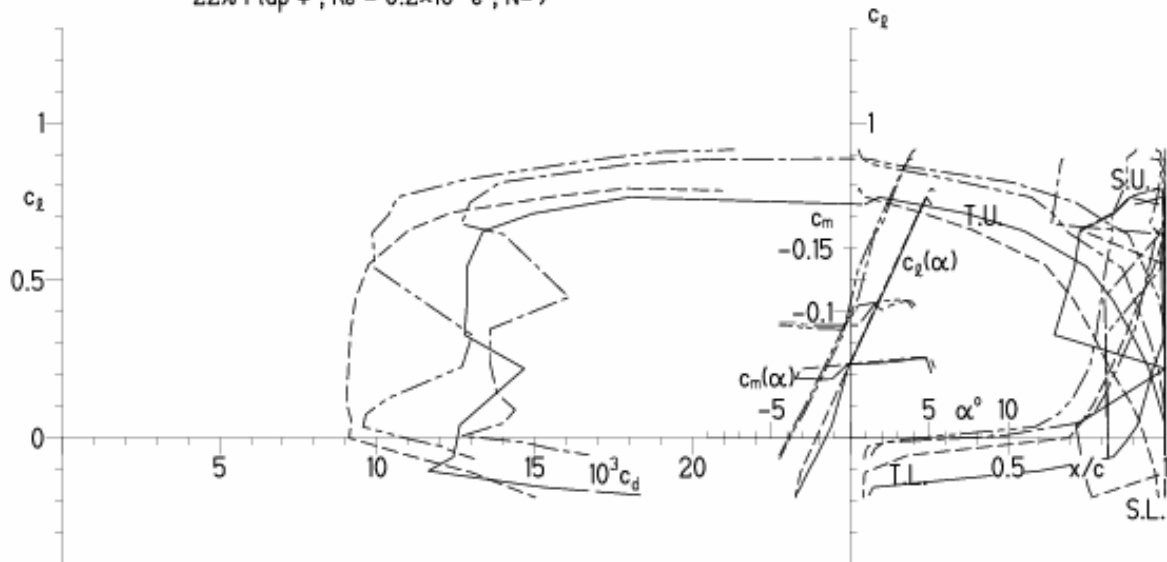


EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:56

HQ/W-1,5/9 9%

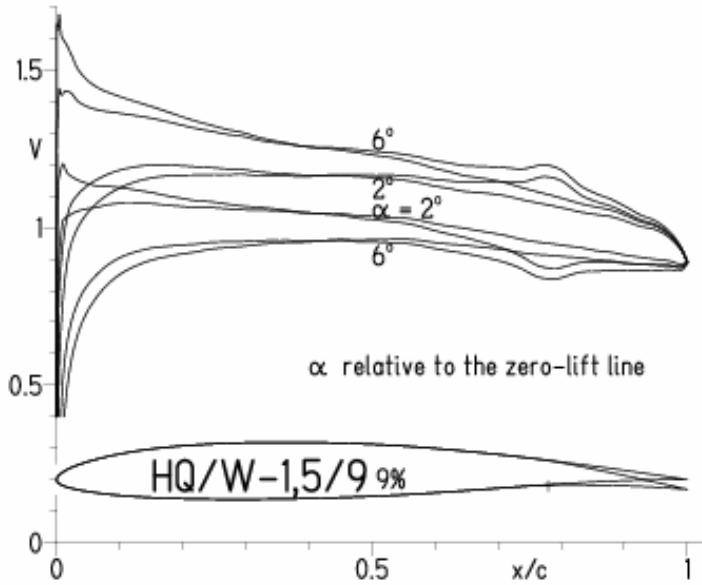
- $Re = 0.1 \times 10^6 e^N, N=9$
- - - $0.2 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=9$

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



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

EPPLER 2005 V. 8.5.07 RUN 5.5.11 19:59

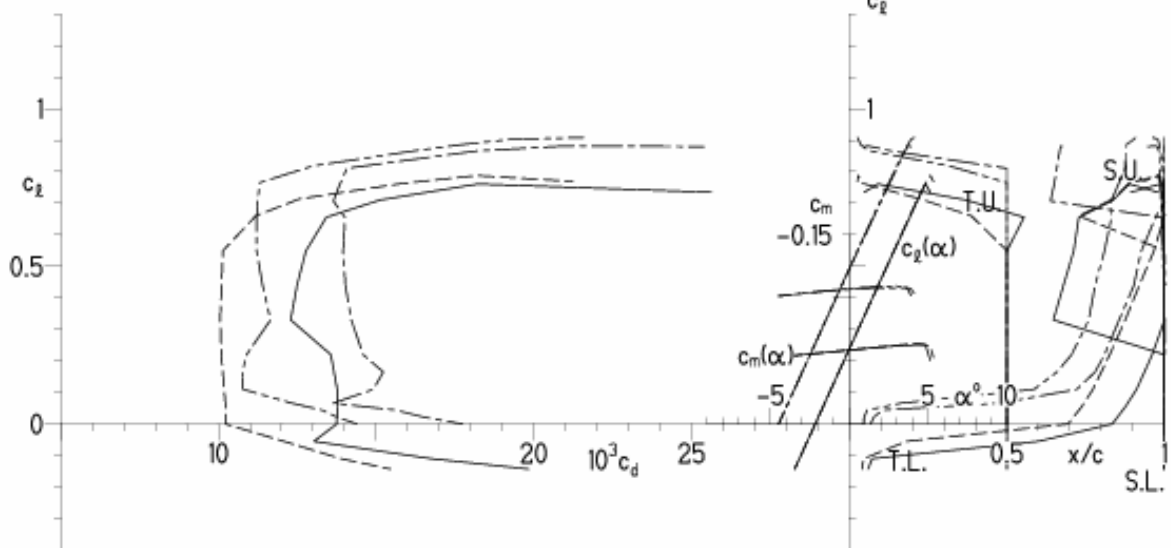


EPPLER 2005 V

HQ/W-1,5/9 9%

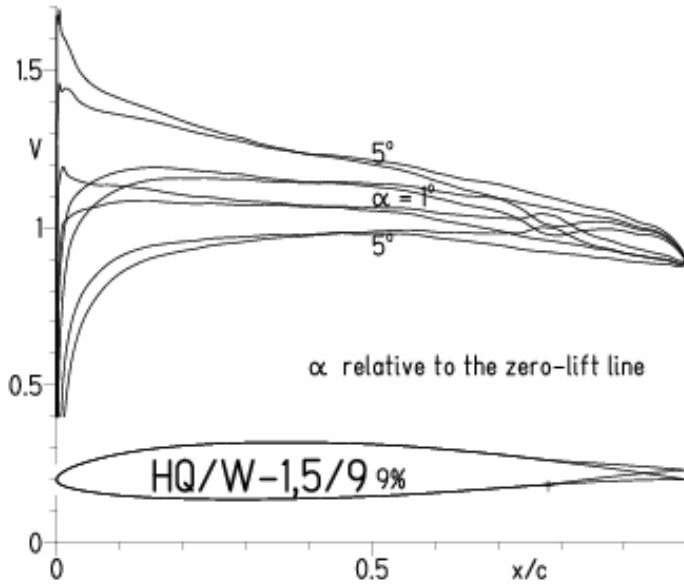
- $Re = 0.1 \times 10^6$, Turb. upper 50% e^N , $N=9$
- - - 0.2×10^6 , Turb. upper 50% e^N , $N=9$
- · · 22% Flap 4° , $Re = 0.1 \times 10^6$, Turb. upper 50% e^N , $N=9$
- · - 22% Flap 4° , $Re = 0.2 \times 10^6$, Turb. upper 50% e^N , $N=9$

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

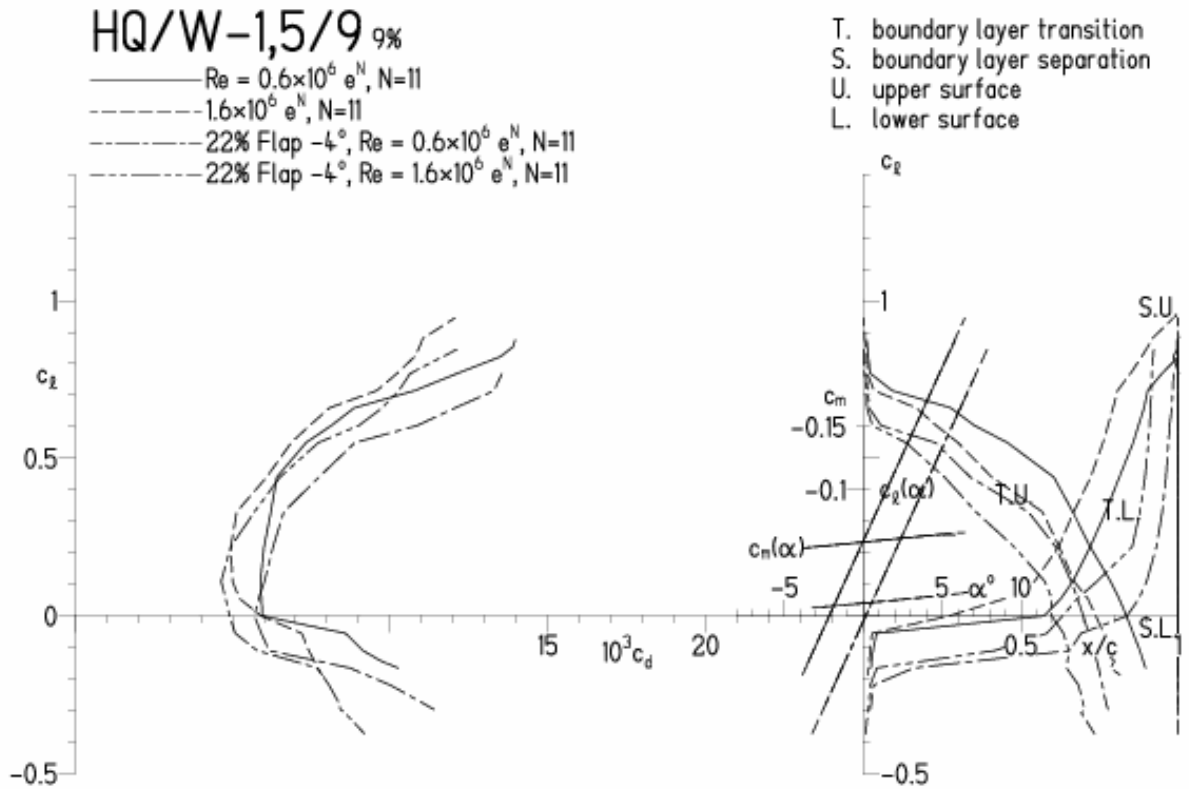


HQ/W-1,5/9, N=11, mit -4° Wölbklappenausschlag
 (Segelflugmodelle mit > 50 g/dm² erreichen damit gut über 300 km/h Höchstgeschwindigkeit)

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:02

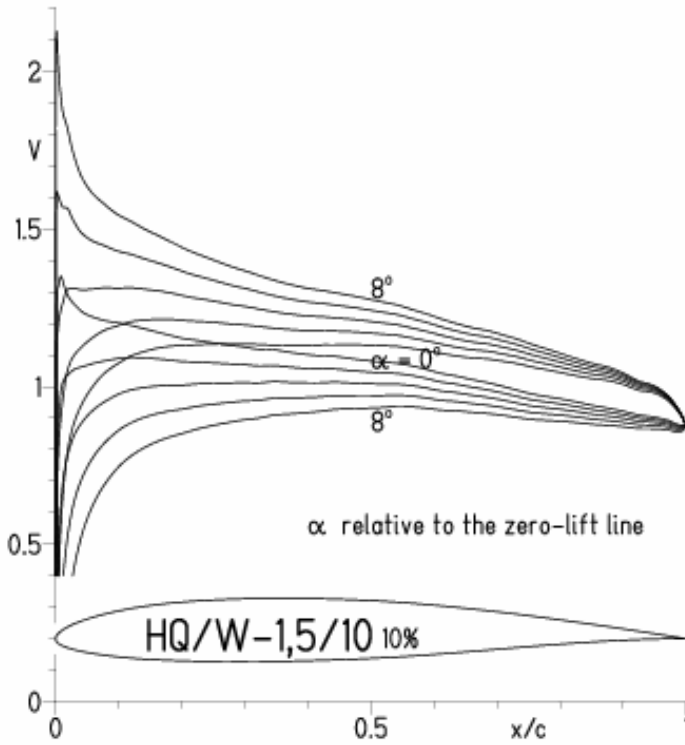


EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:02

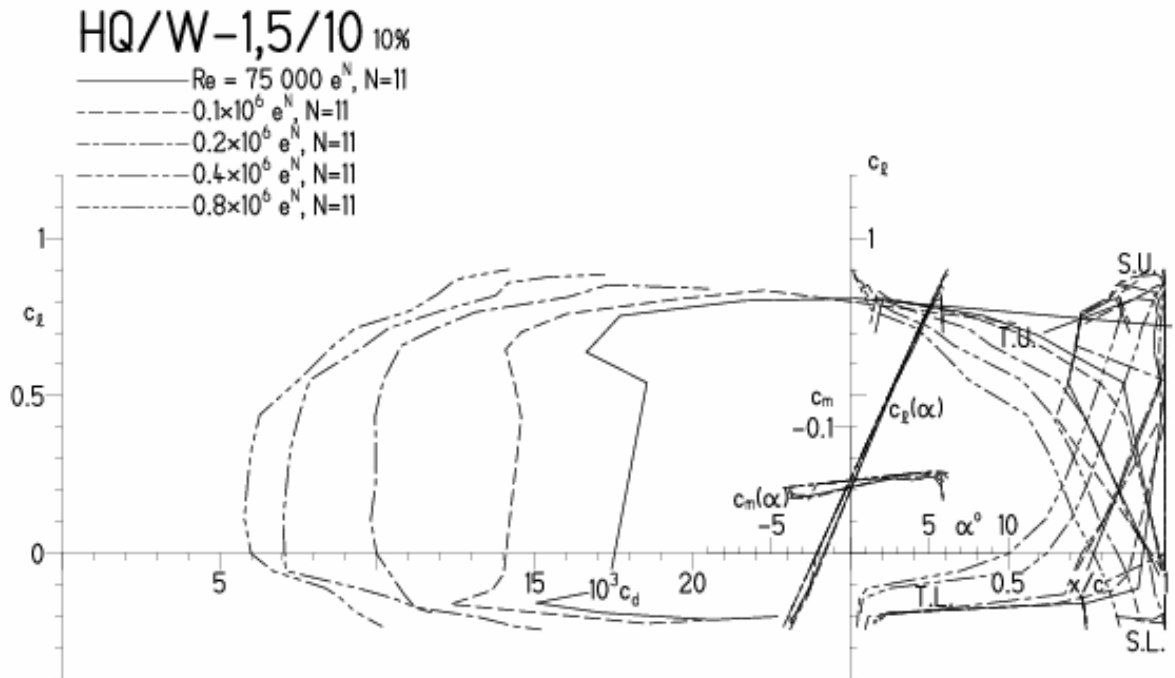


HQ/W-1,5/10, N=11

EPPLER 2005 V. 8.5.07 RUN 2.5.11 16:27

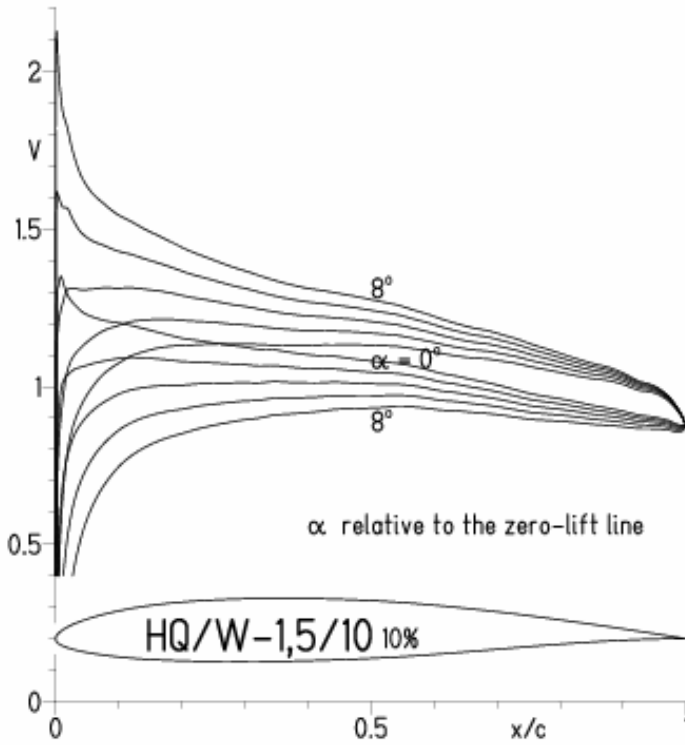


EPPLER 2005 V. 8.5.07 RUN 2.5.11 16:27

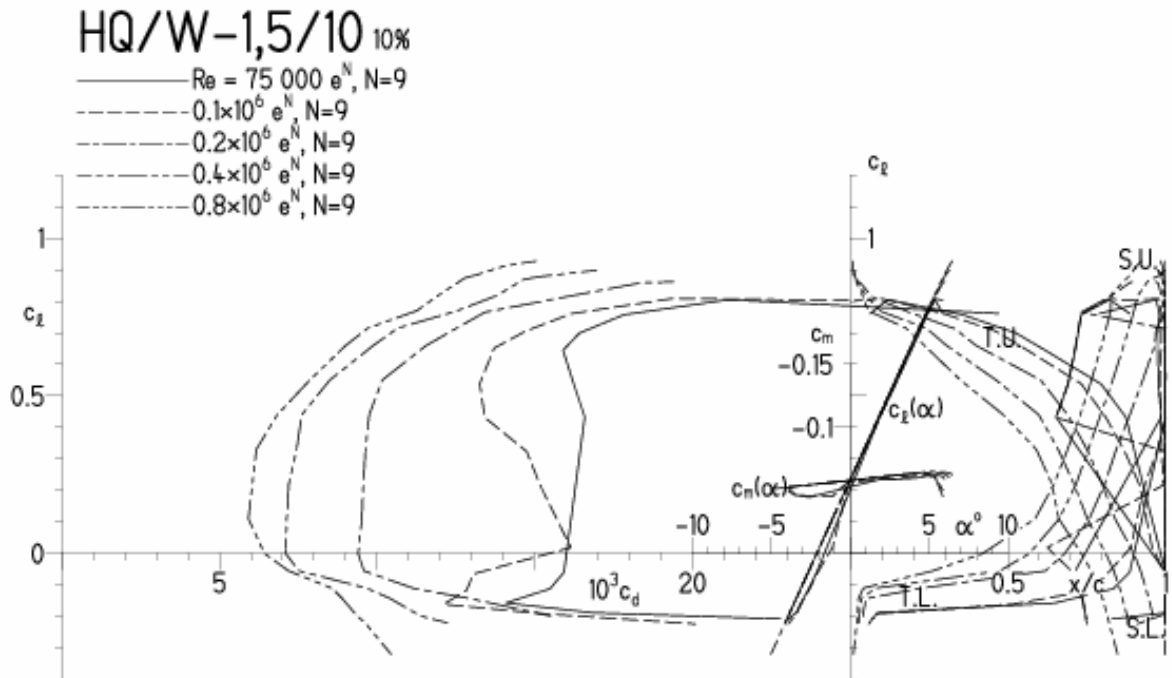


HQ/W-1,5/10, N=9

EPPLER 2005 V. 8.5.07 RUN 2.5.11 16:59

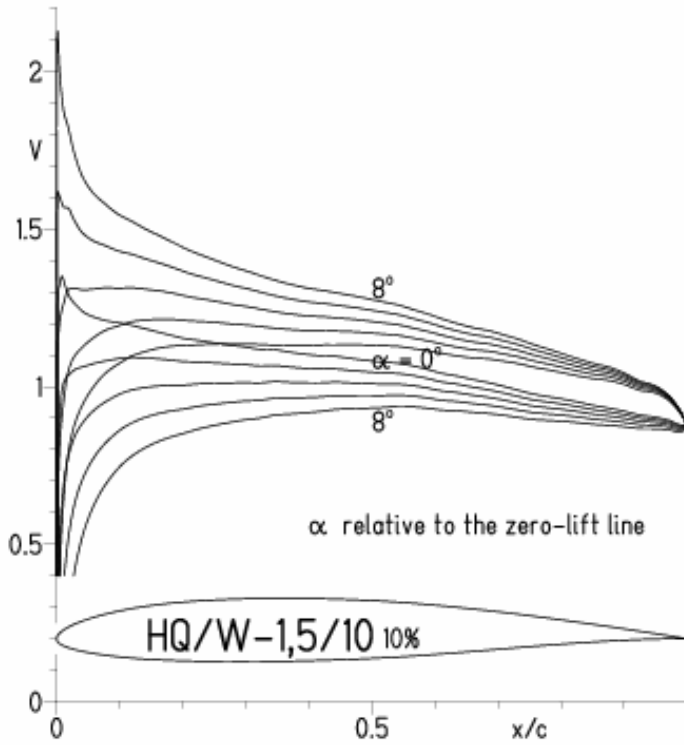


EPPLER 2005 V. 8.5.07 RUN 2.5.11 16:59



HQ/W-1,5/10, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

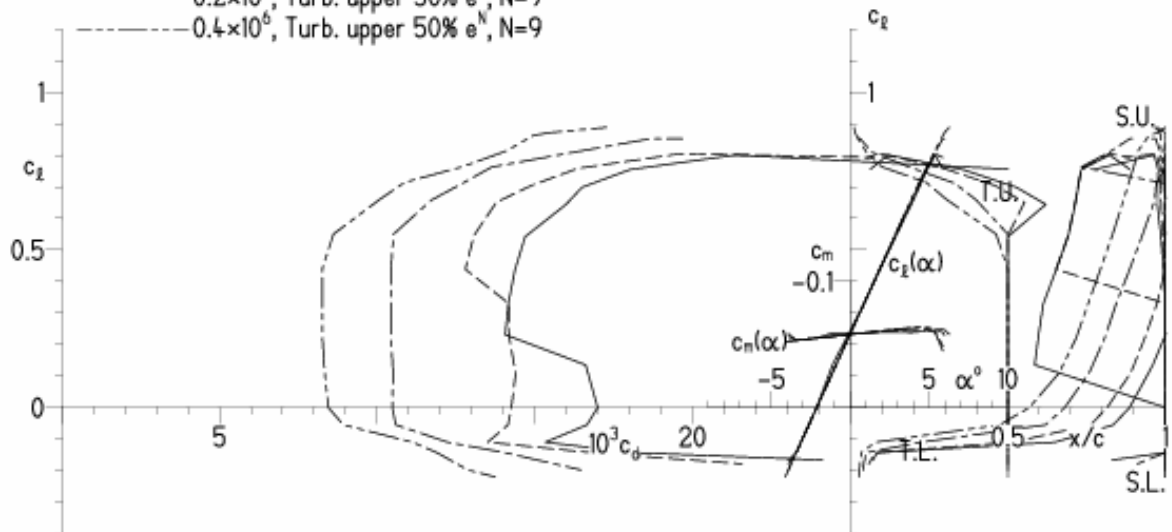
EPPLER 2005 V. 8.5.07 RUN 2.5.11 17:03



EPPLER 2005 V. 8.5.07 RUN 2.5.11 17:03

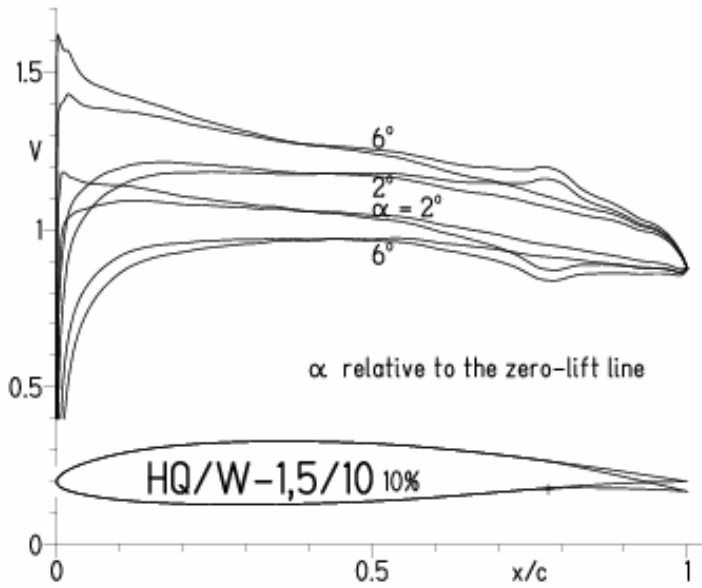
HQ/W-1,5/10 10%

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



HQ/W-1,5/10, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:06

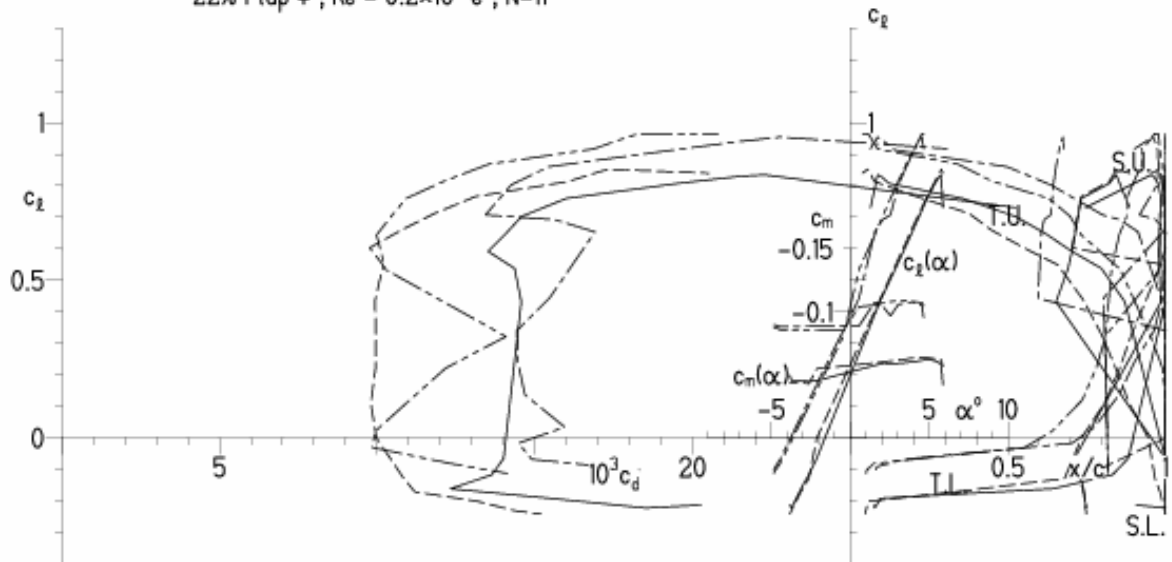


EPPLER 2005 V. 8.5.07 RUN 5.5.11 2

HQ/W-1,5/10 10%

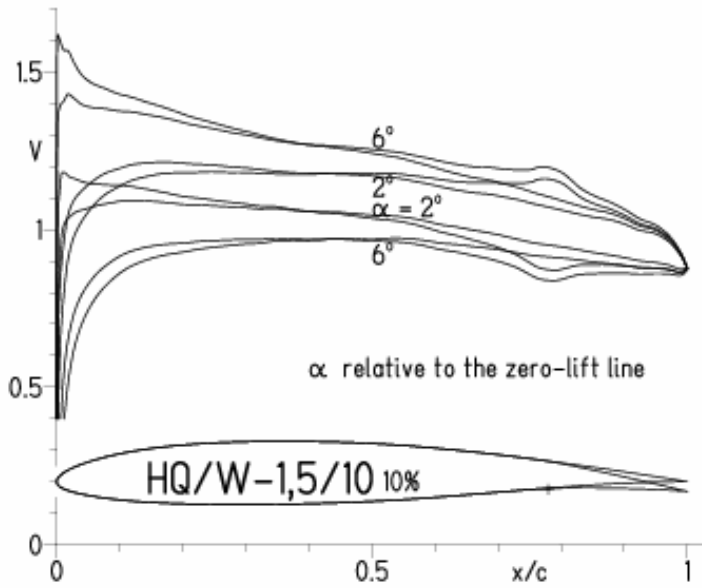
- $Re = 0.1 \times 10^6 e^N, N=11$
- - - $0.2 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=11$

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



HQ/W-1,5/10, N=9, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:09

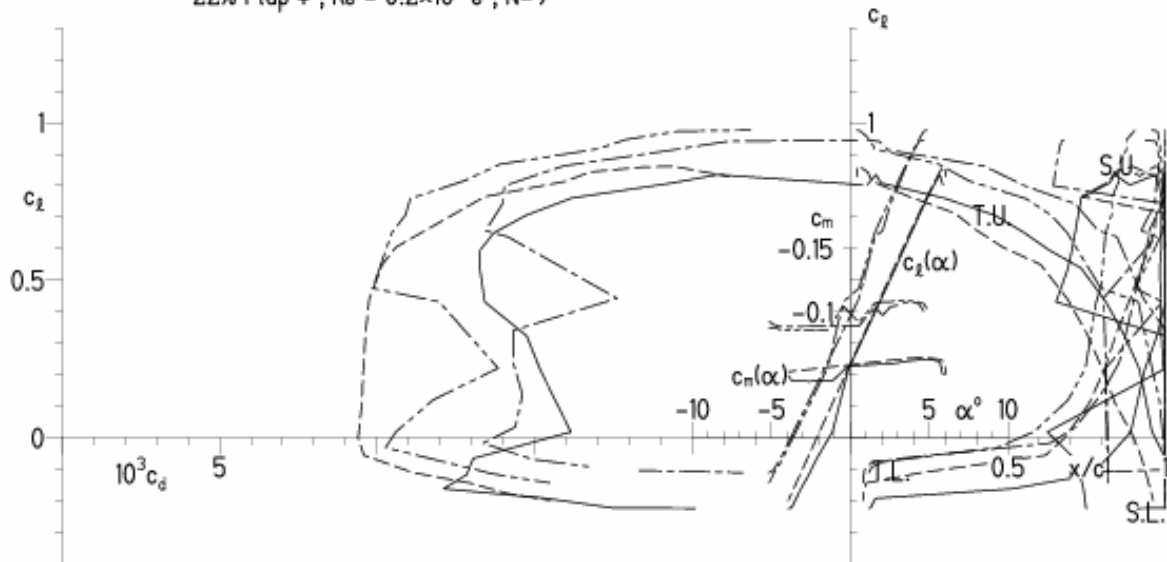


EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:09

HQ/W-1,5/10 10%

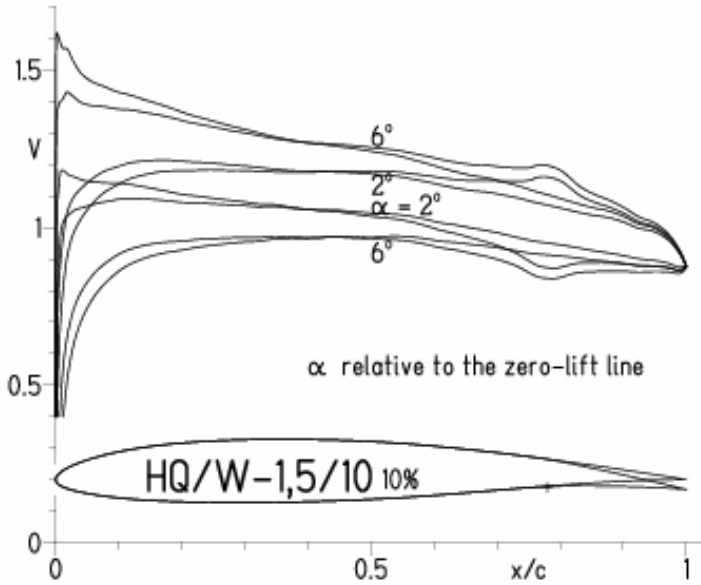
- $Re = 0.1 \times 10^6 e^N, N=9$
- - - $0.2 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=9$

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



HQ/W-1,5/10, N=9, mit +4° Wölbklappenausschlag, Turbulatoreffekt
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:12

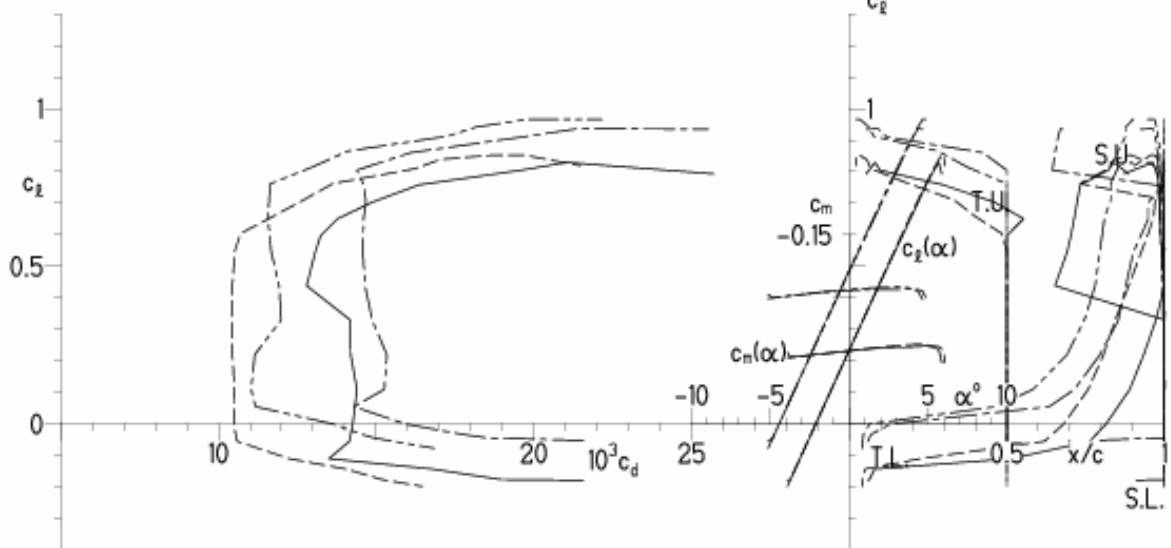


EPPLER 2005 V. 8.5.07 RUN 5.5.

HQ/W-1,5/10 10%

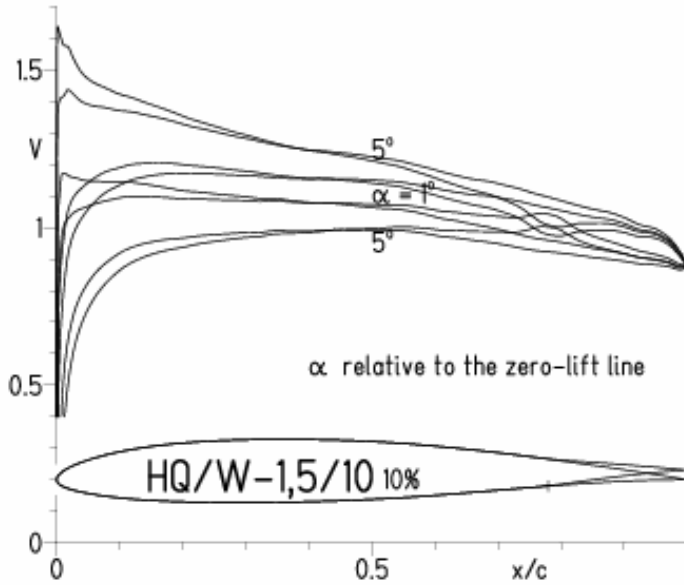
- Re = 0.1×10^6 , Turb. upper 50% e^N, N=9
- - - Re = 0.2×10^6 , Turb. upper 50% e^N, N=9
- 22% Flap 4°, Re = 0.1×10^6 , Turb. upper 50% e^N, N=9
- - - 22% Flap 4°, Re = 0.2×10^6 , Turb. upper 50% e^N, N=9

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

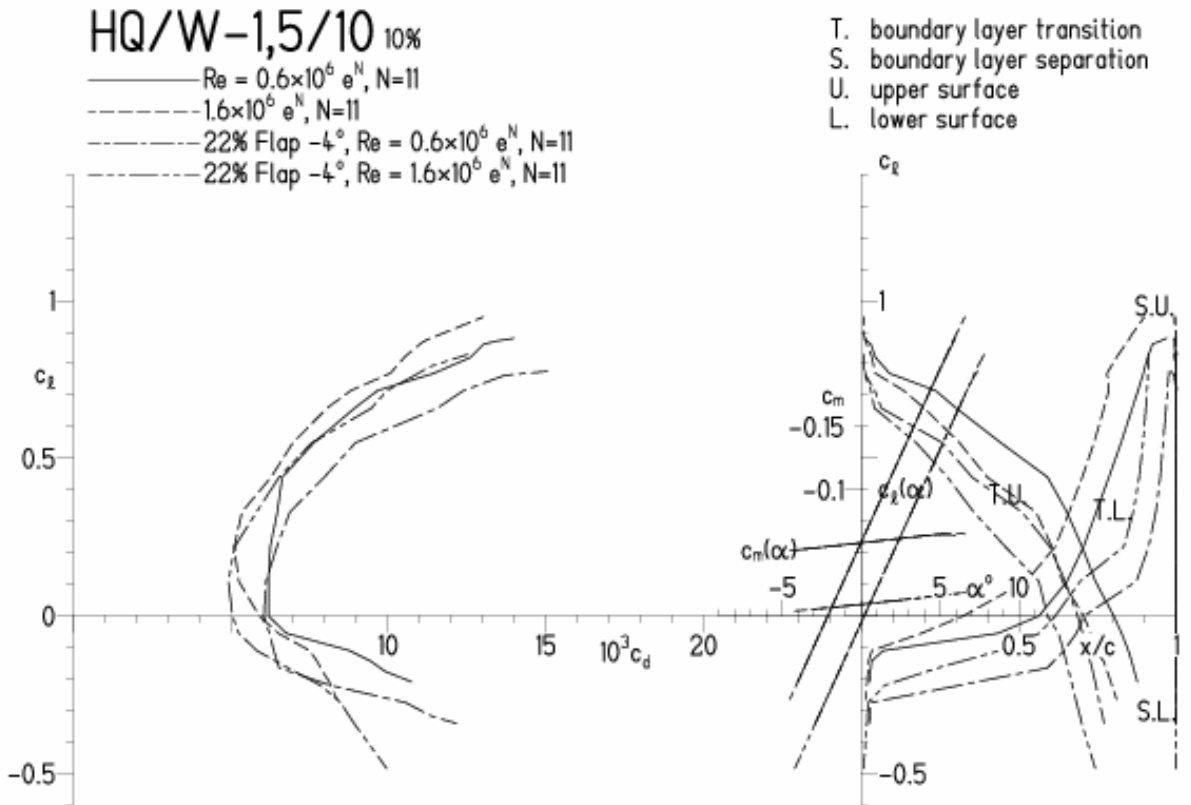


HQ/W-1,5/10, N=11, mit -4° Wölbklappenausschlag
 (Segelflugmodelle mit $> 50 \text{ g/dm}^2$ erreichen damit gut über 300 km/h)

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:16

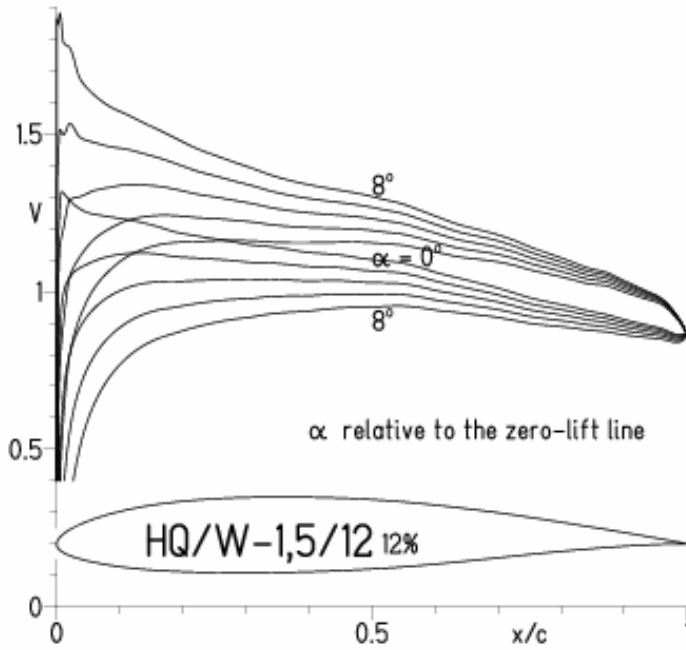


EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:16

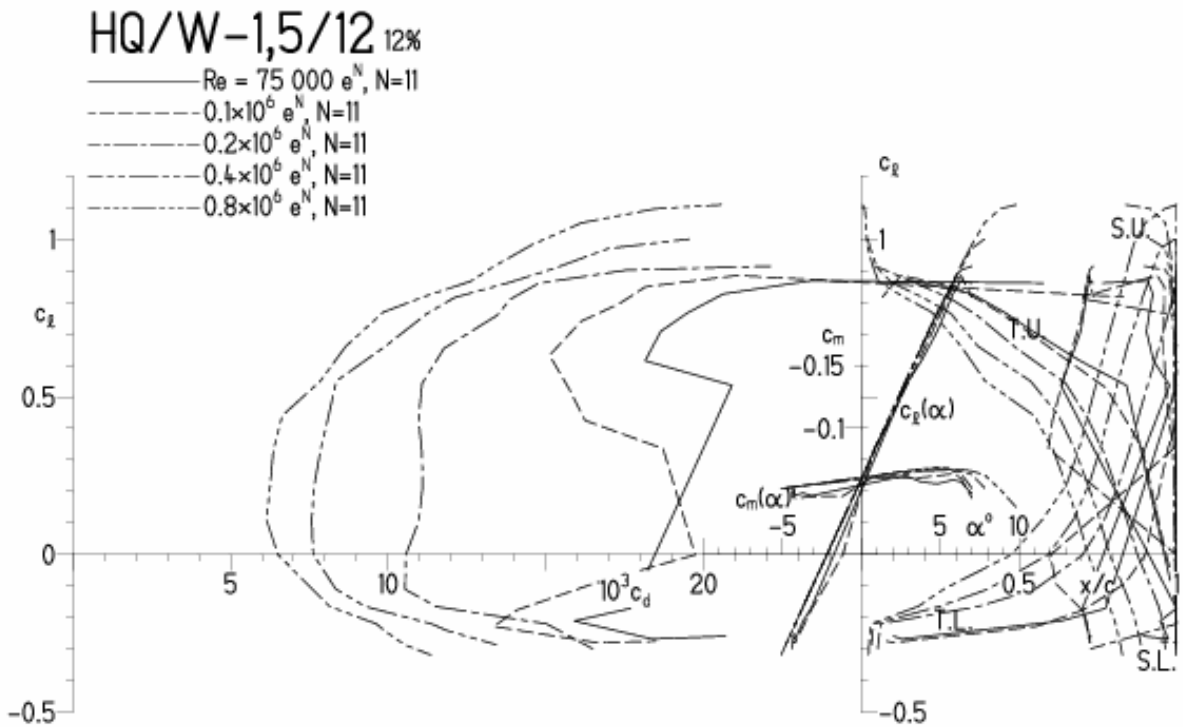


HQ/W-1,5/12, N=11

EPPLER 2005 V. 8.5.07 RUN 3.5.11 17:17

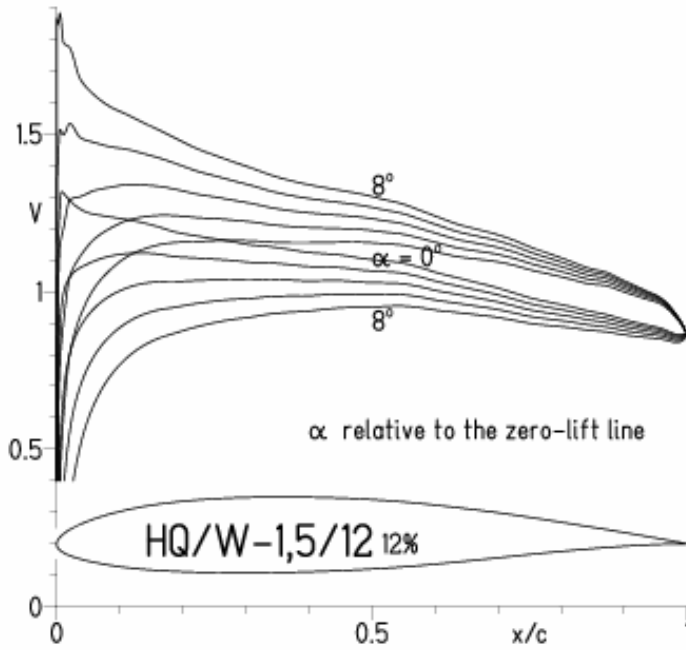


EPPLER 2005 V. 8.5.07 RUN 3.5.11 17:17

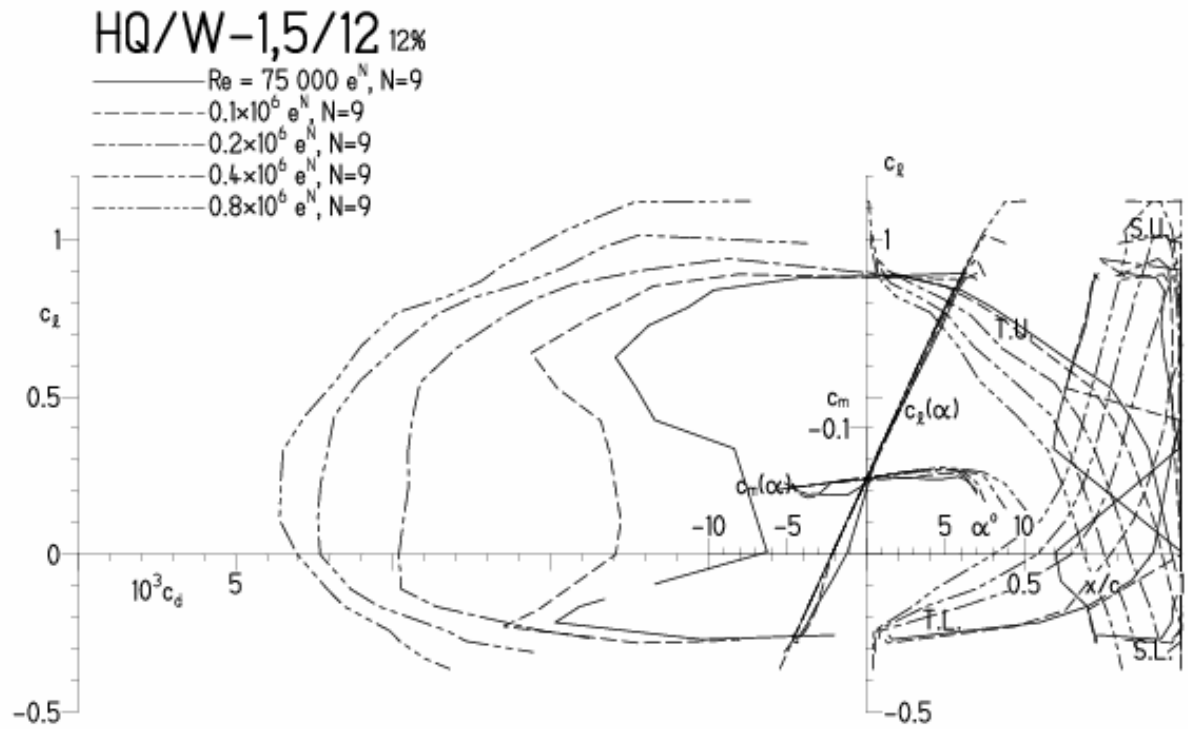


HQ/W-1,5/12, N=9

EPPLER 2005 V. 8.5.07 RUN 3.5.11 17:29

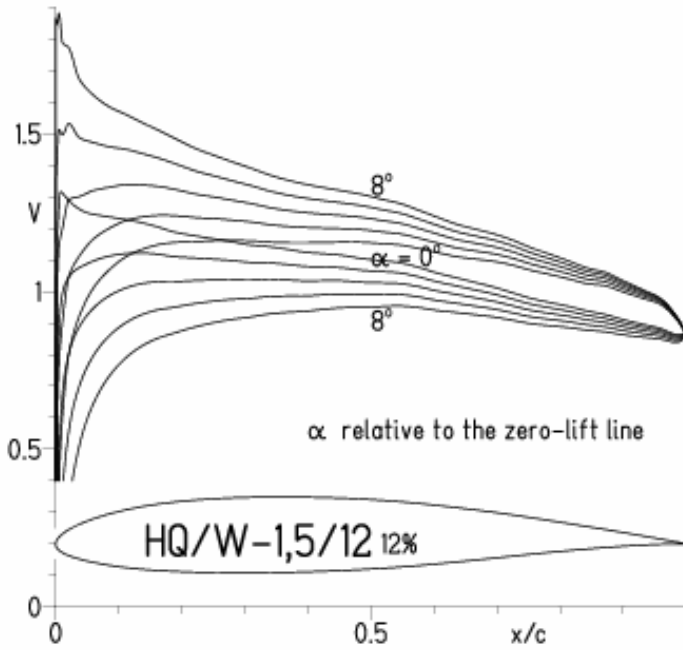


EPPLER 2005 V. 8.5.07 RUN 3.5.11 17:29



HQ/W-1,5/12, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

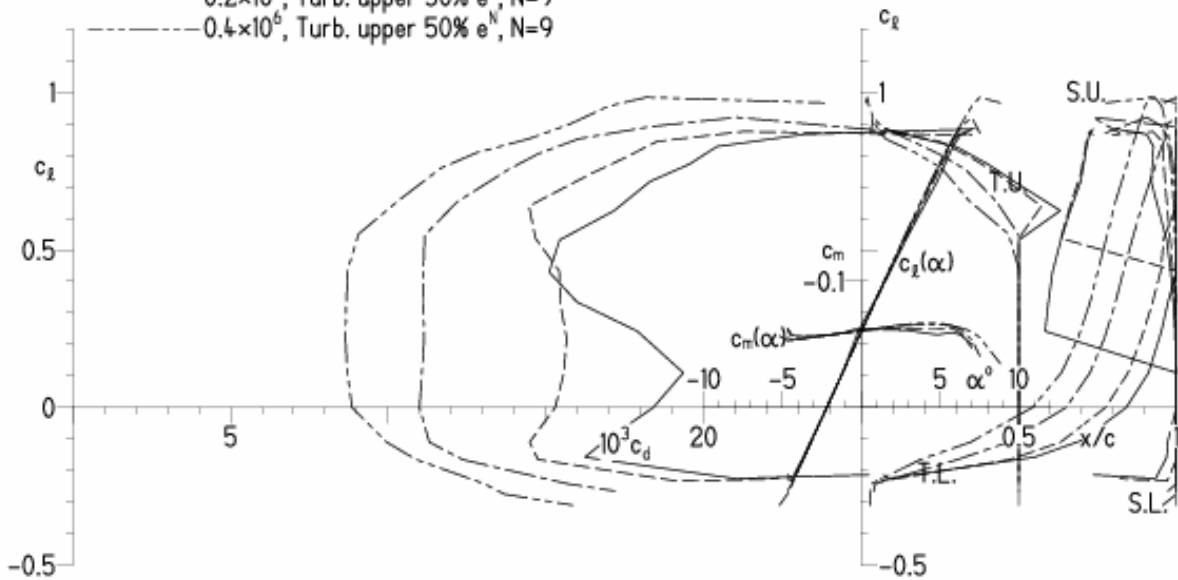
EPPLER 2005 V. 8.5.07 RUN 3.5.11 17:33



EPPLER 2005 V. 8.5.07 RUN 3.5.11 17:33

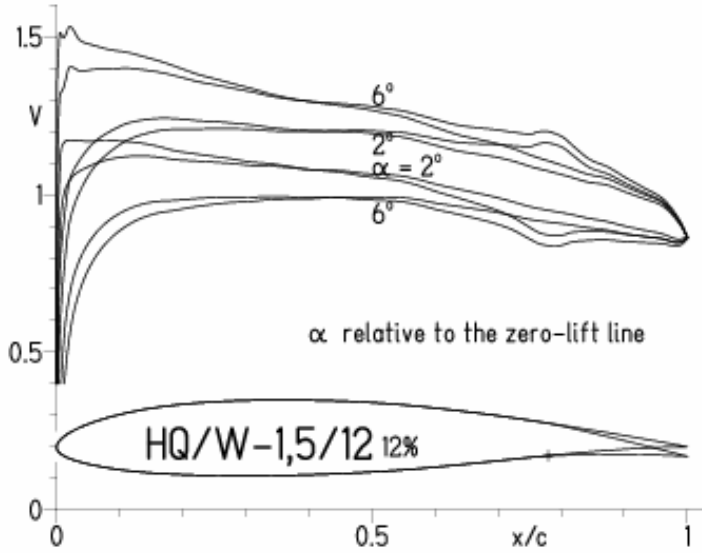
HQ/W-1,5/12 12%

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



HQ/W-1,5/12, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:19

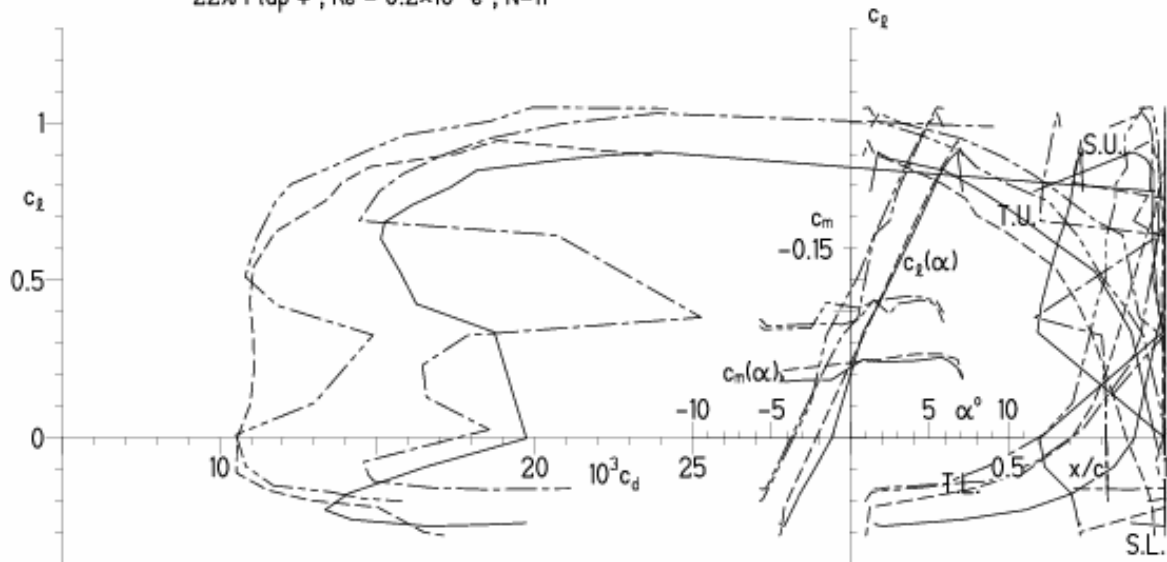


EPPLER 200

HQ/W-1,5/12 12%

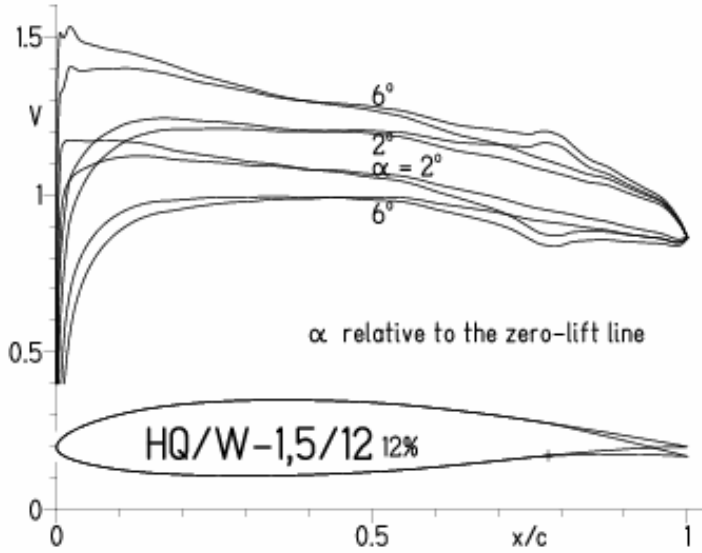
- $Re = 0.1 \times 10^6 e^N, N=11$
- - - $0.2 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=11$

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



HQ/W-1,5/12, N=9, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:22

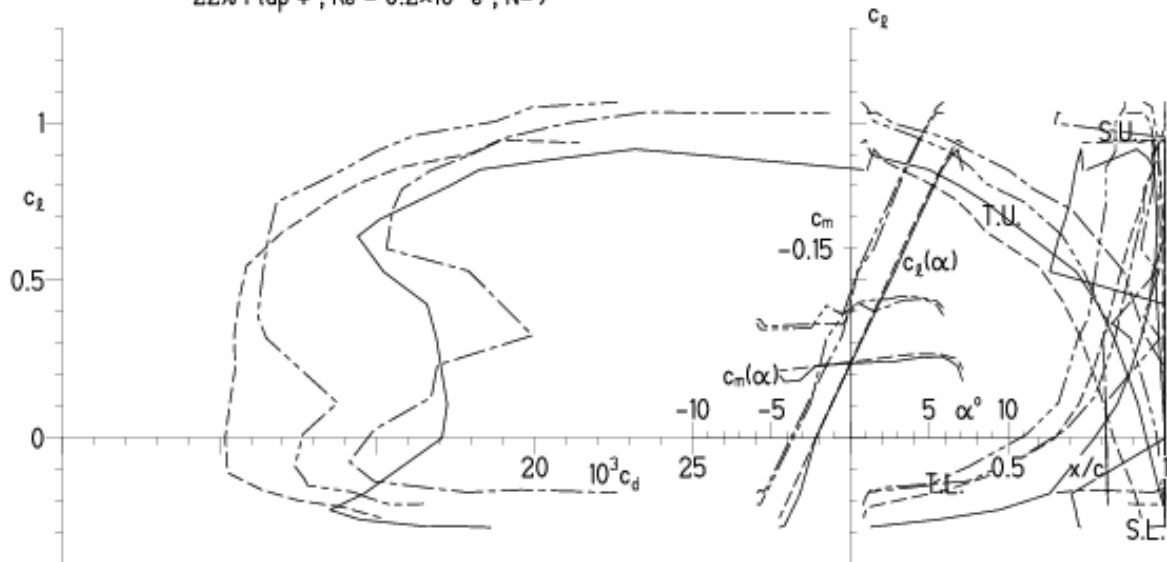


EPPLER 2005 V. 8.

HQ/W-1,5/12 12%

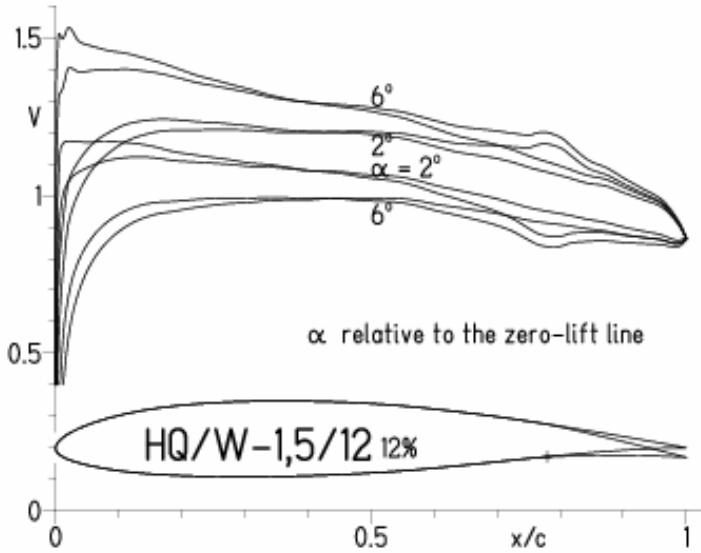
- $Re = 0.1 \times 10^6 e^N, N=9$
- - - $0.2 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=9$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=9$

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



HQ/W-1,5/12, N=9, mit +4° Wölbklappenausschlag, Turbulatoreffekt
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:24

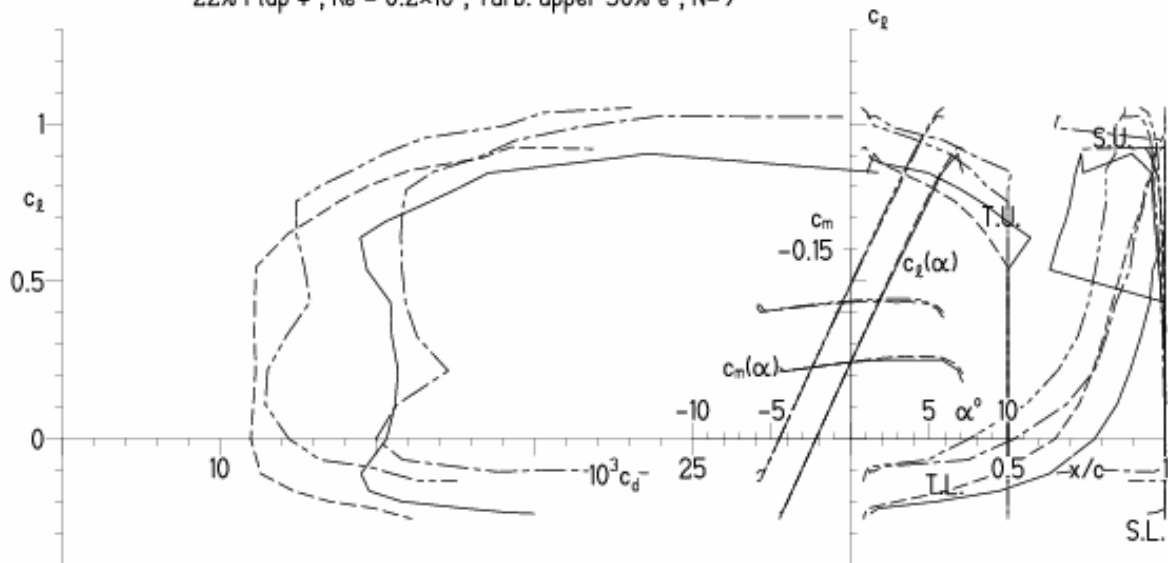


EPPLER 2005 V. 8.5.07 RUN 5.5.11 2

HQ/W-1,5/12 12%

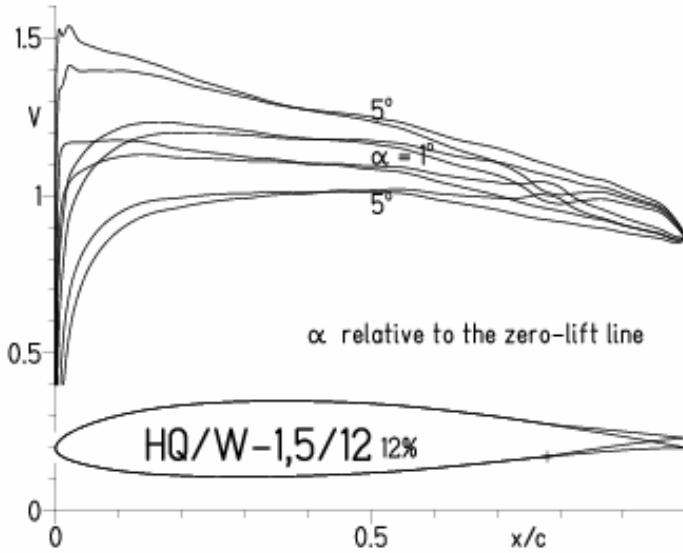
- $Re = 0.1 \times 10^6$, Turb. upper 50% e^N , $N=9$
- - - 0.2×10^6 , Turb. upper 50% e^N , $N=9$
- · · 22% Flap 4° , $Re = 0.1 \times 10^6$, Turb. upper 50% e^N , $N=9$
- · - 22% Flap 4° , $Re = 0.2 \times 10^6$, Turb. upper 50% e^N , $N=9$

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

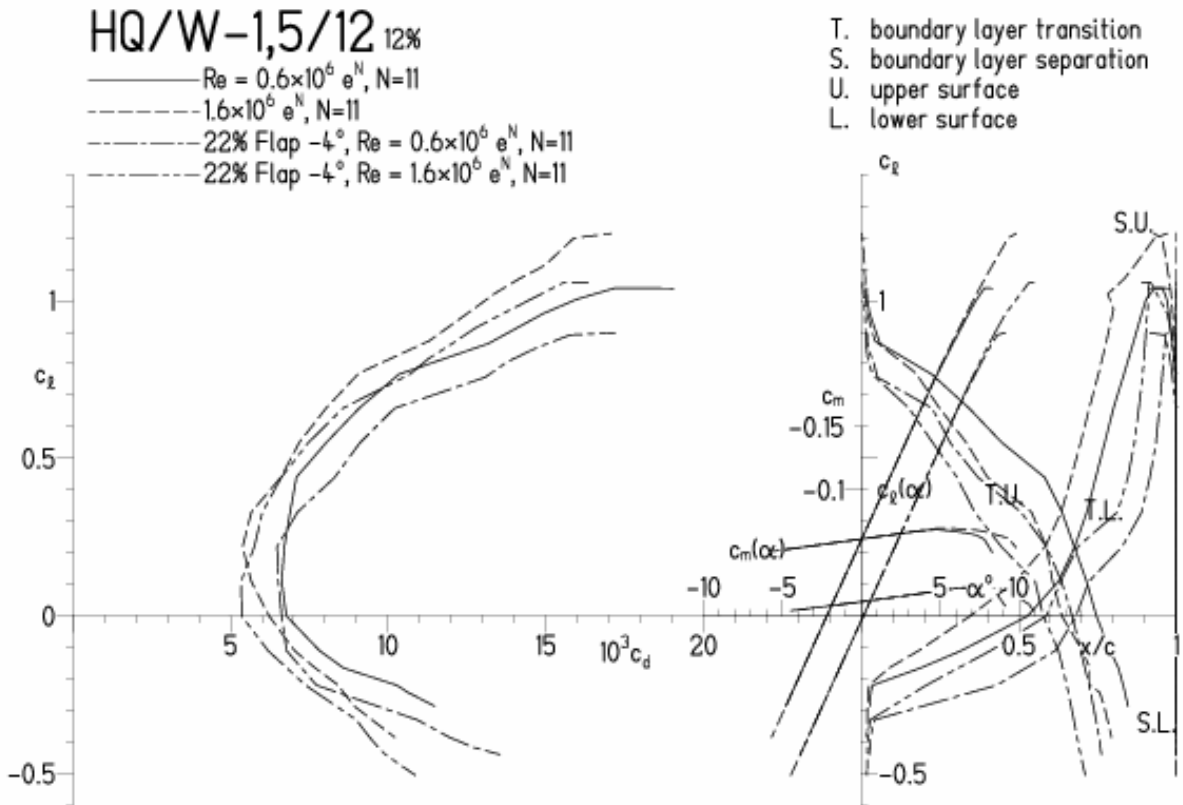


HQ/W-1,5/12, N=11, mit -4° Wölbklappenausschlag
 (Segelmodelle erreichen damit hohe Endgeschwindigkeiten)

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:27

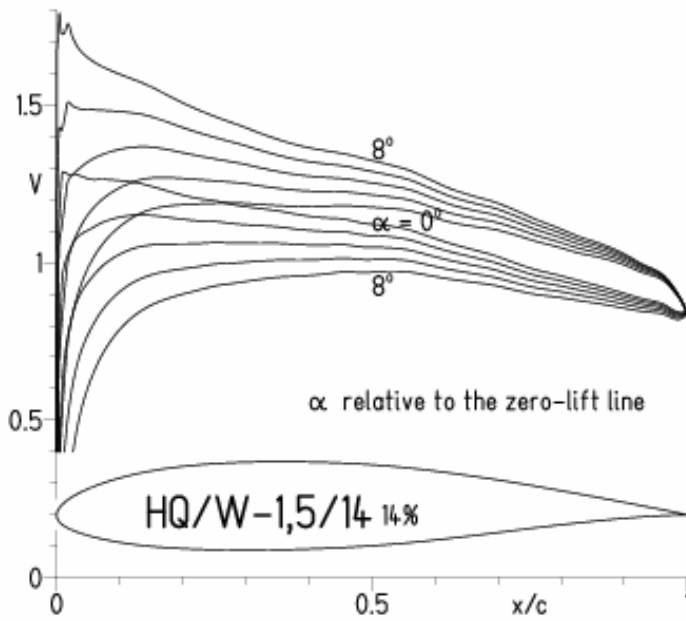


EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:27

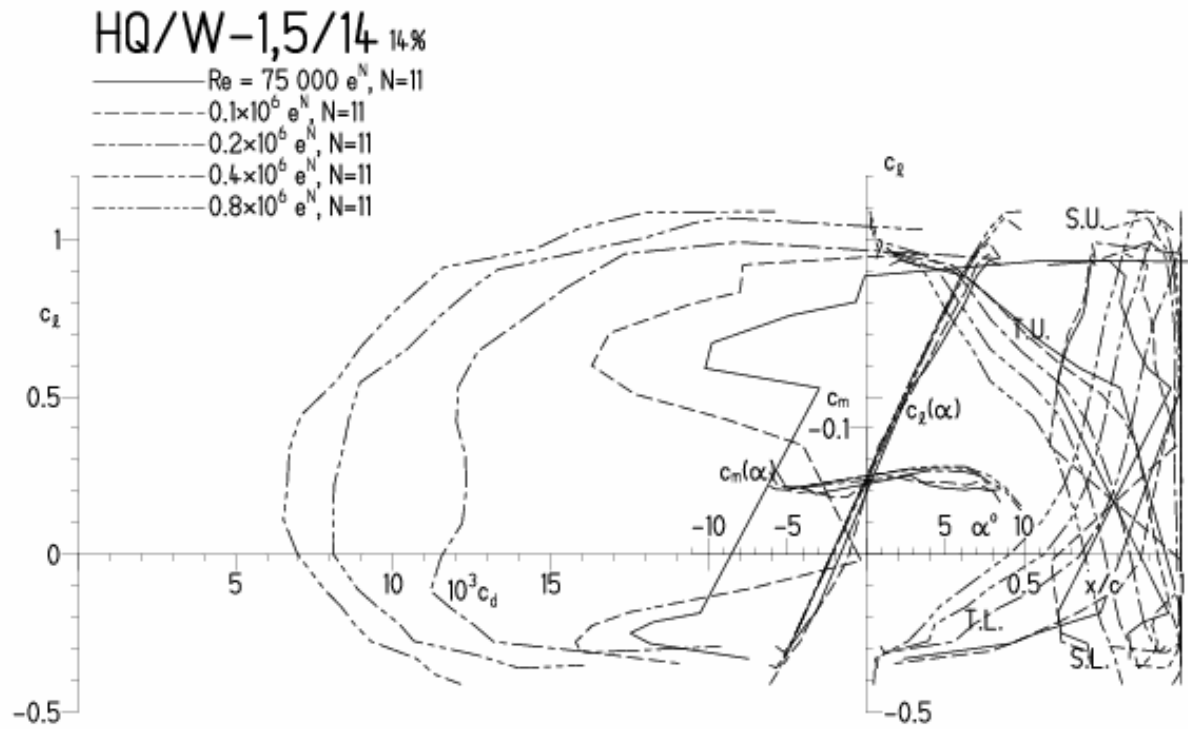


HQ/W-1,5/14, N=11

EPPLER 2005 V. 8.5.07 RUN 4.5.11 16:25

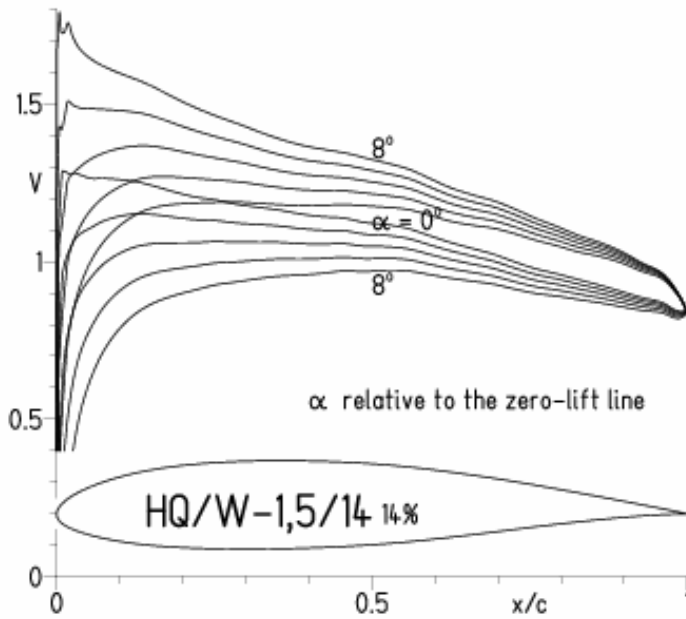


EPPLER 2005 V. 8.5.07 RUN 4.5.11 16:25



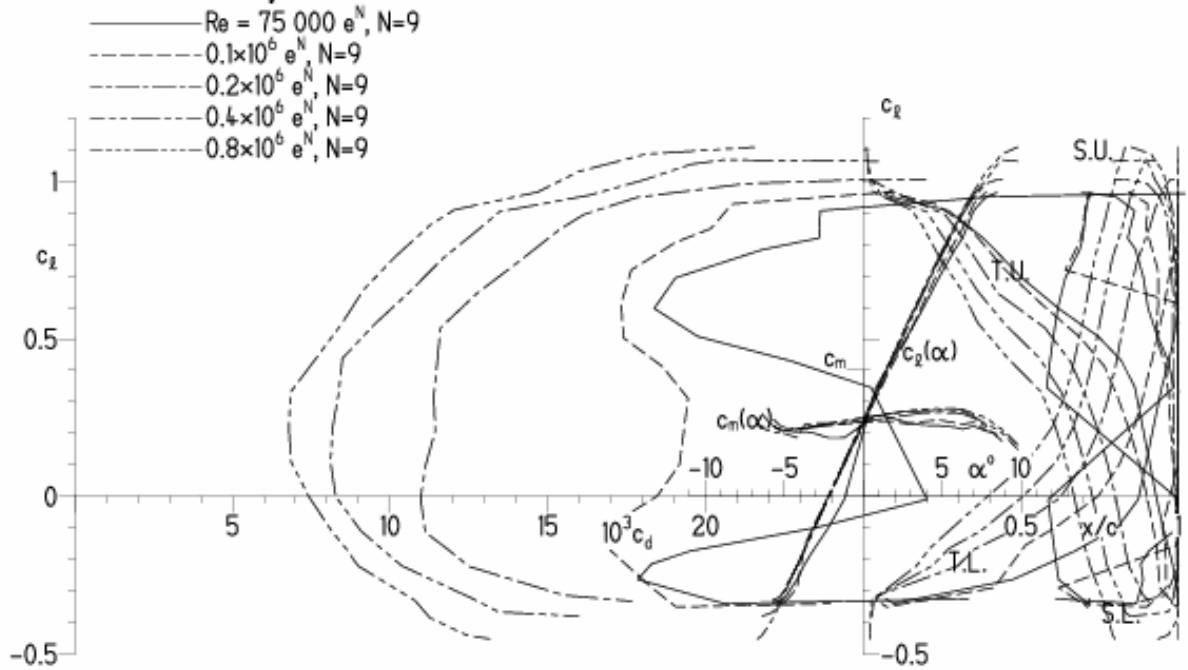
HQ/W-1,5/14, N=9

EPPLER 2005 V. 8.5.07 RUN 4.5.11 16:33



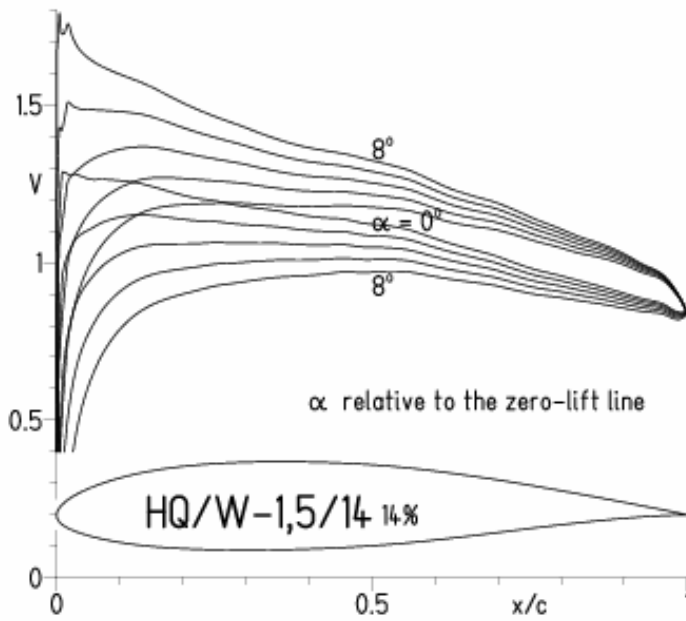
EPPLER 200

HQ/W-1,5/14 14%

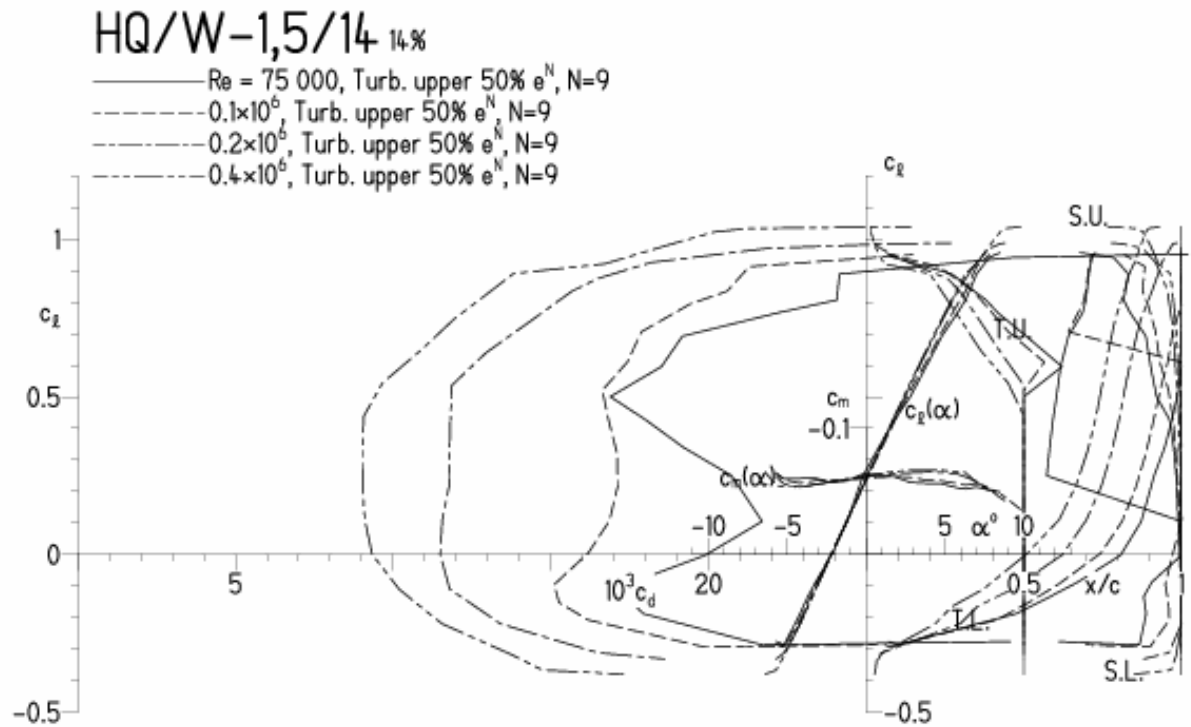


HQ/W-1,5/14, N=9, Turbulatoreffekt (optimal beim Maximum der Wölbung)

EPPLER 2005 V. 8.5.07 RUN 4.5.11 16:36

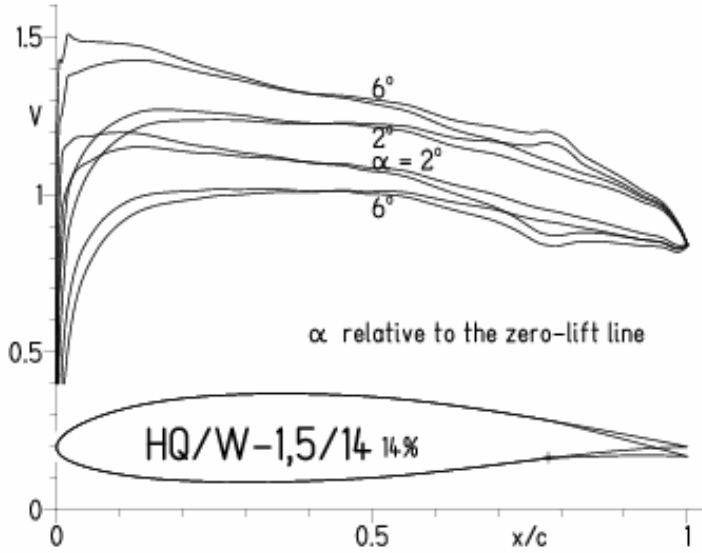


EPPLER 2005 V. 8.5.07 RUN 4.5.11 16:36



HQ/W-1,5/14, N=11, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:31

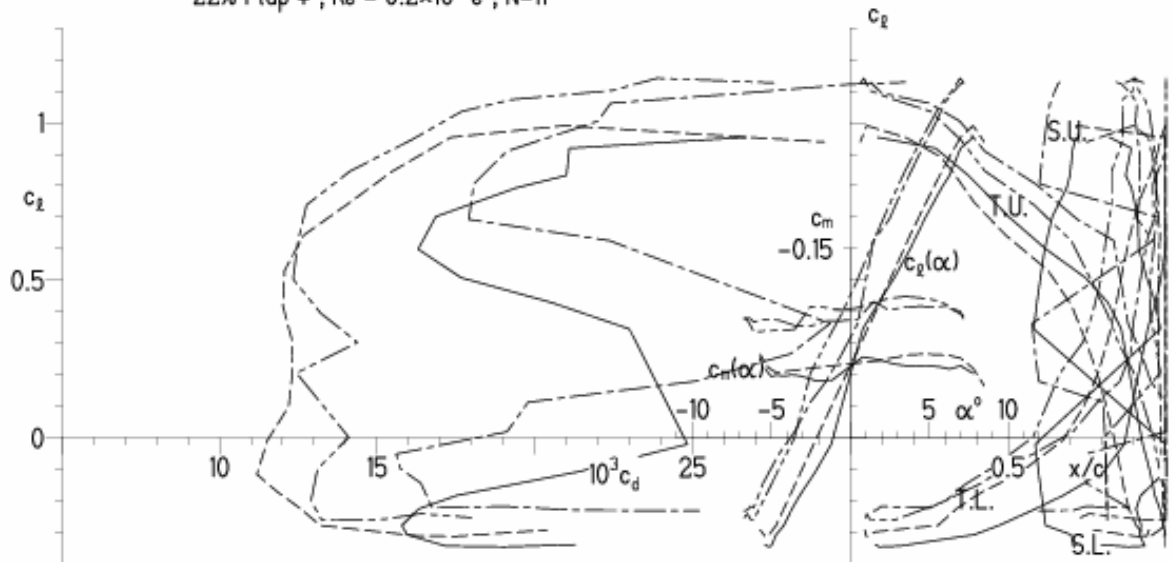


EPPLER 20

HQ/W-1,5/14 14%

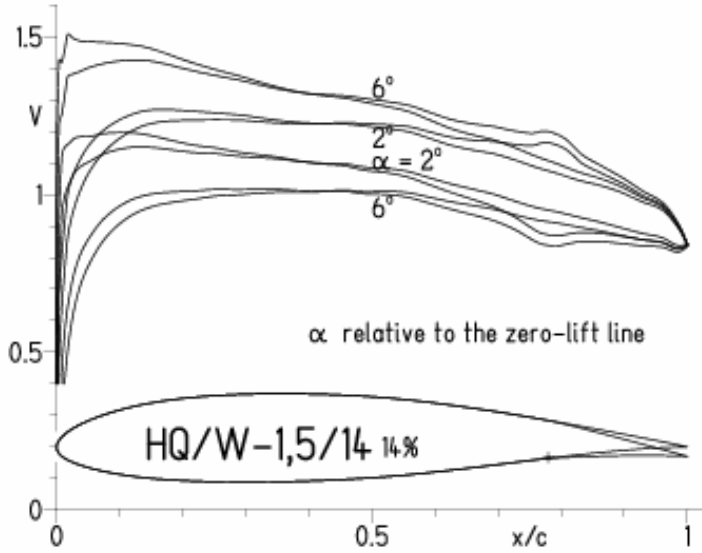
- $Re = 0.1 \times 10^6 e^N, N=11$
- - - $0.2 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=11$

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



HQ/W-1,5/14, N=9, mit +4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:34

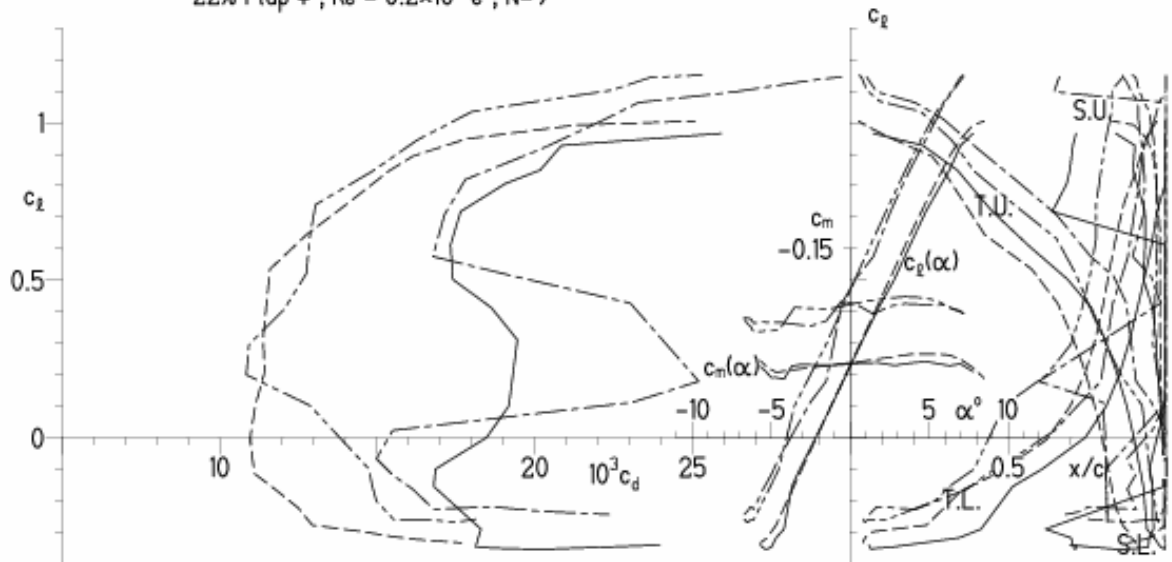


EPPLER 20

HQ/W-1,5/14 14%

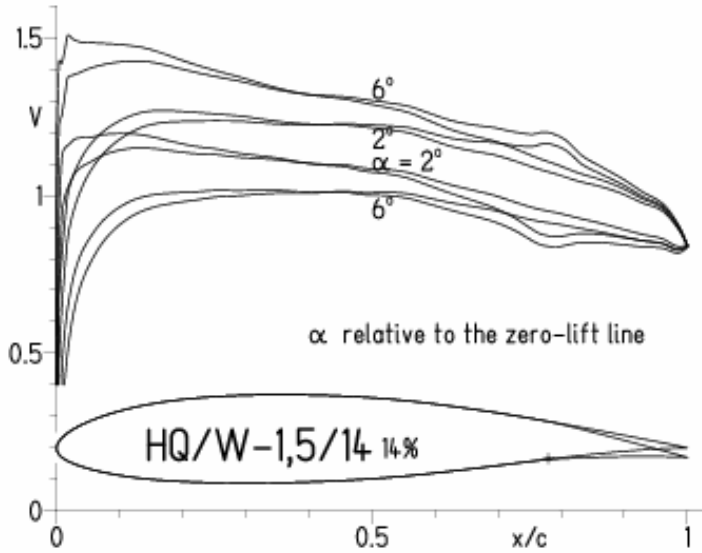
- $Re = 0.1 \times 10^6 e^N, N=9$
- - - $0.2 \times 10^6 e^N, N=9$
- · - · - 22% Flap $4^\circ, Re = 0.1 \times 10^6 e^N, N=9$
- · - · - 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=9$

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



HQ/W-1,5/14, N=9, mit +4° Wölbklappenausschlag, Turbulatoreffekt
 (Verbesserungen für niedrige Geschwindigkeiten und Profiltiefen an Flügelenden)

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:36

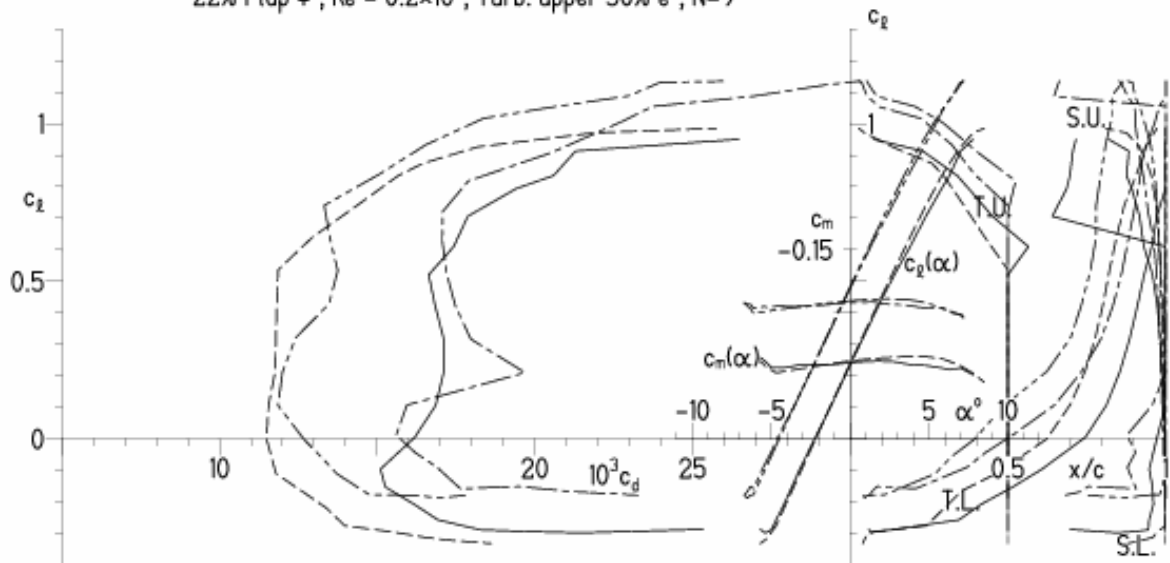


EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:36

HQ/W-1,5/14 14%

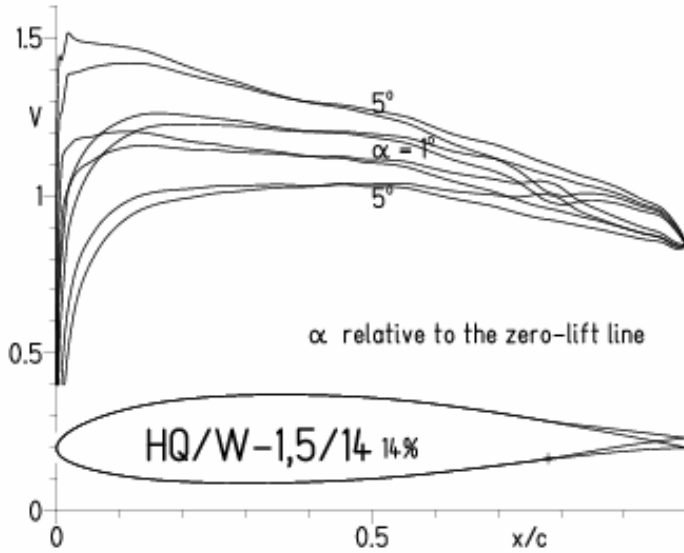
- Re = 0.1×10^6 , Turb. upper 50% e^N, N=9
- - - Re = 0.2×10^6 , Turb. upper 50% e^N, N=9
- · - 22% Flap 4°, Re = 0.1×10^6 , Turb. upper 50% e^N, N=9
- · - 22% Flap 4°, Re = 0.2×10^6 , Turb. upper 50% e^N, N=9

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



HQ/W-1,5/14, N=11, mit -4° Wölbklappenausschlag
 (Segelmodelle erreichen damit hohe Endgeschwindigkeiten)

EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:40



EPPLER 2005 V. 8.5.07 RUN 5.5.11 20:40

