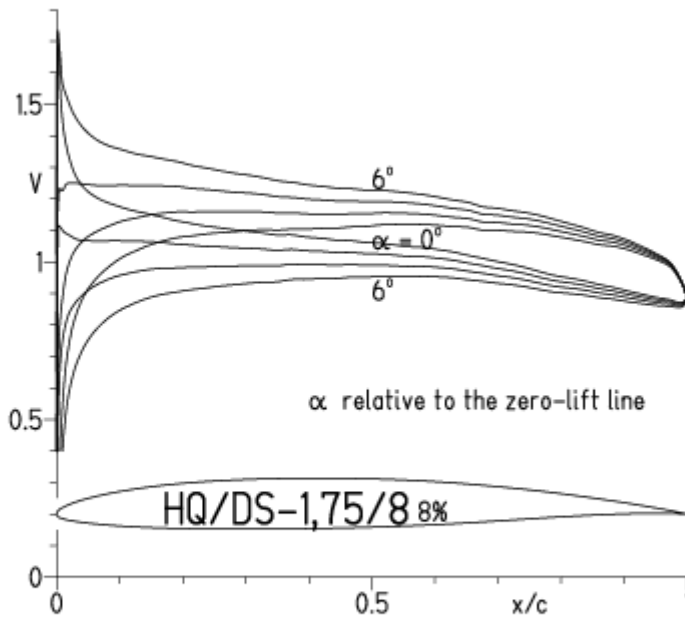


HQ/DS-1,75/8-Polaren, N=11

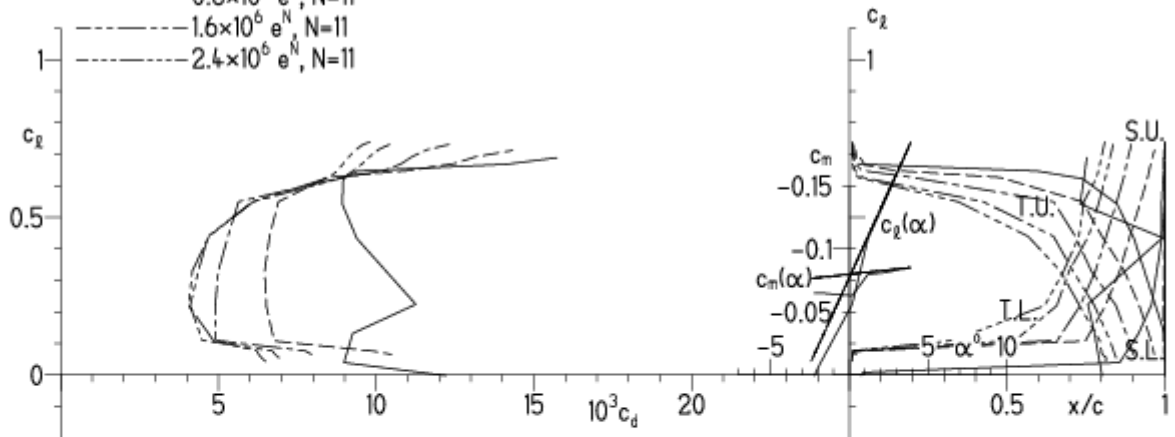
EPPLER 2005 V. 8.5.07 RUN 23.3.12 12:59



EPPLER 2005 V. 8.5.07 RUN 23.3.12 12:59

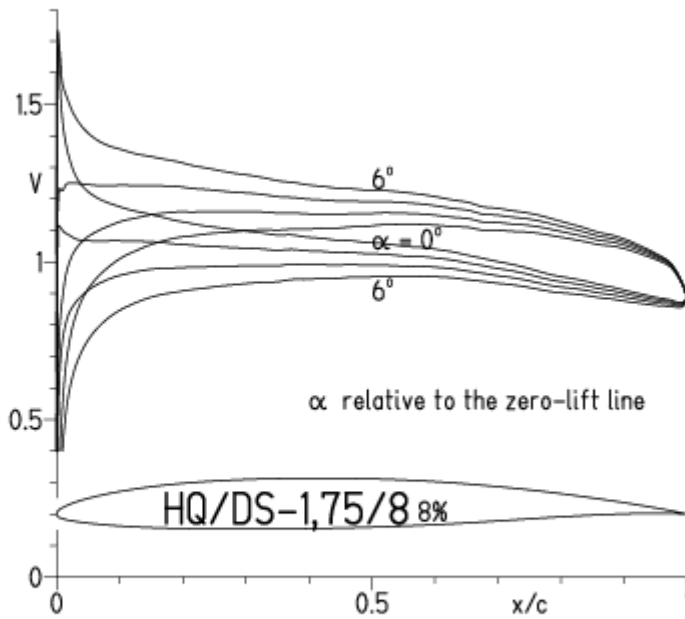
HQ/DS-1,75/8 8%

- $Re = 0.2 \times 10^6 e^N, N=11$
- - - $0.4 \times 10^6 e^N, N=11$
- · - $0.8 \times 10^6 e^N, N=11$
- · - · $1.6 \times 10^6 e^N, N=11$
- · - · - $2.4 \times 10^6 e^N, N=11$



HQ/DS-1,75/8-Polaren, N=9

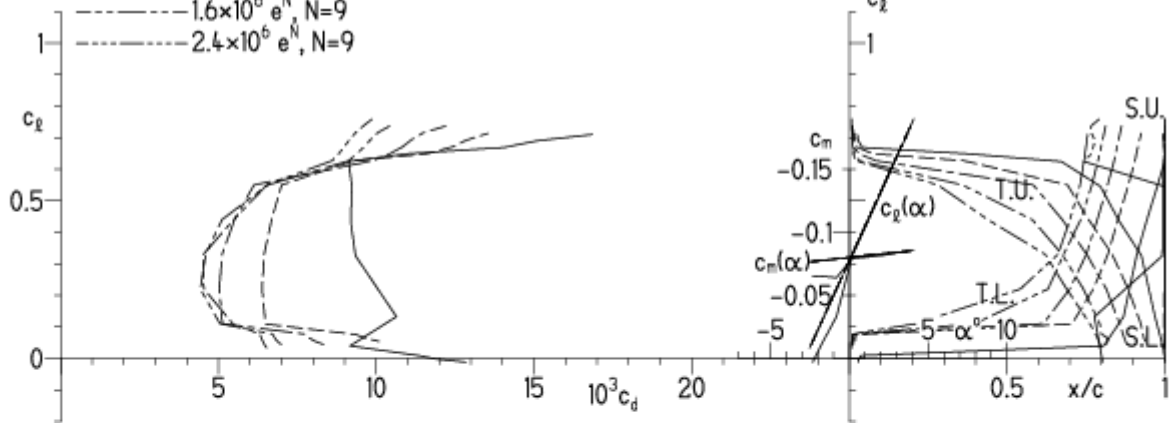
EPPLER 2005 V. 8.5.07 RUN 23.3.12 13:05



EPPLER 2005 V. 8.5.07 RUN 23.3.12 13:05

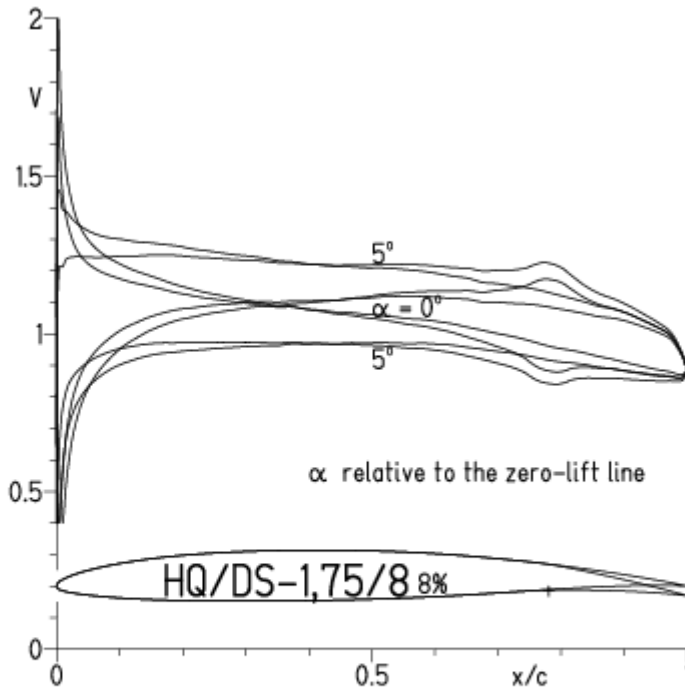
HQ/DS-1,75/8 8%

- $Re = 0.2 \times 10^6 e^N, N=9$
- - - $0.4 \times 10^6 e^N, N=9$
- · - $0.8 \times 10^6 e^N, N=9$
- · - · $1.6 \times 10^6 e^N, N=9$
- · - · - $2.4 \times 10^6 e^N, N=9$



HQ/DS-1,75/8-Polaren, N=11, mit 4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 23.3.12 16:15

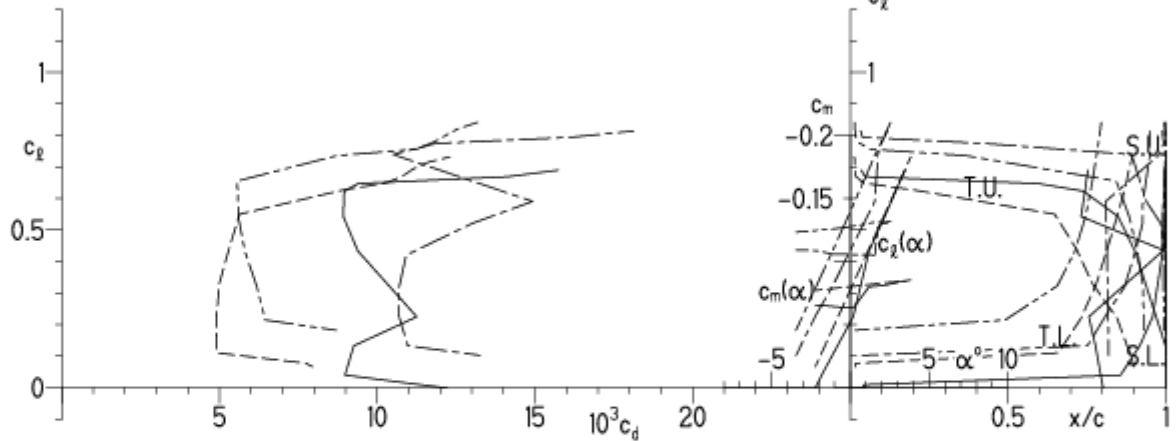


EPPLER 2005 V. 8.5.07 RUN 23.3.12 16:15

HQ/DS-1,75/8 8%

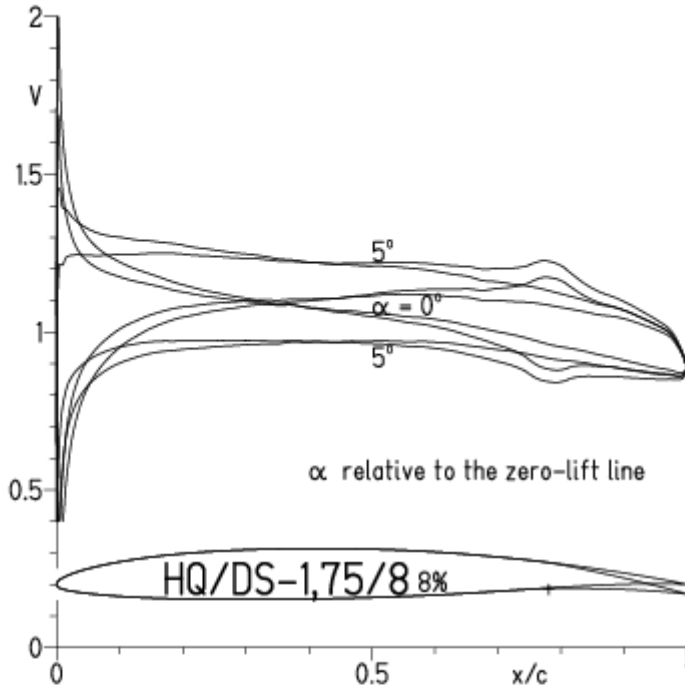
- $Re = 0.2 \times 10^6 e^N, N=11$
- - - $0.8 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.8 \times 10^6 e^N, N=11$

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



HQ/DS-1,75/8-Polaren, N=9, mit 4° Wölbklappenausschlag, Turbulatoreffekt
(optimale Turbulatorposition bei 45 – 55 % Profiltiefe, für schmale Aussenflügel)

EPPLER 2005 V. 8.5.07 RUN 23.3.12 16:20

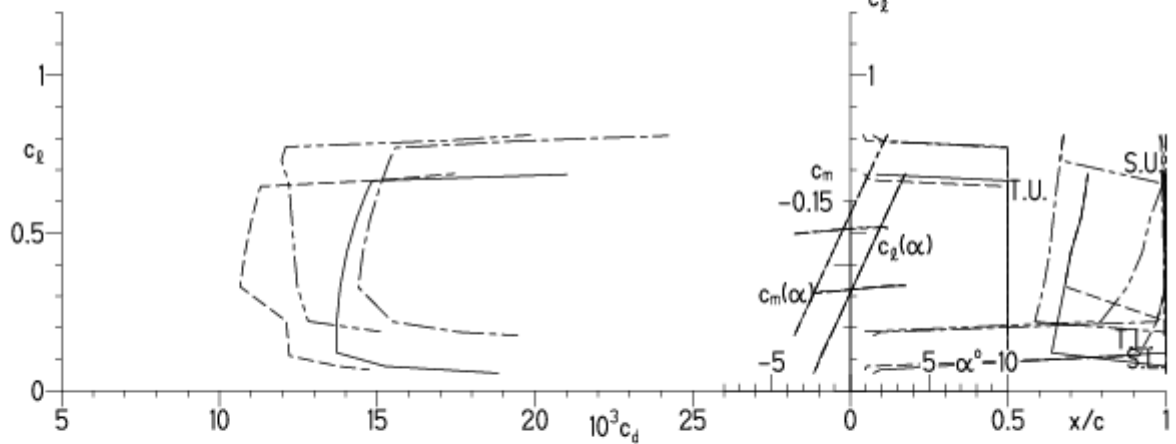


EPPLER 2005 V. 8.5.07 RUN 23.3.12 16:20

HQ/DS-1,75/8 8%

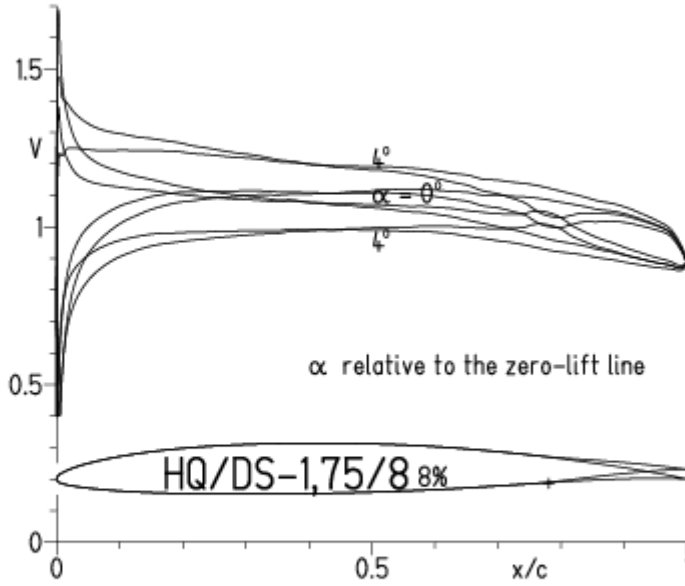
- Re = 75 000, Turb. upper 50% e^N, N=11
- - - 0.15×10⁶, Turb. upper 50% e^N, N=11
- · - 22% Flap 4°, Re = 75 000, Turb. upper 50% e^N, N=11
- · - 22% Flap 4°, Re = 0.15×10⁶, Turb. upper 50% e^N, N=11

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



HQ/DS-1,75/8-Polaren, N=11, mit -4° Wölbklappenausschlag

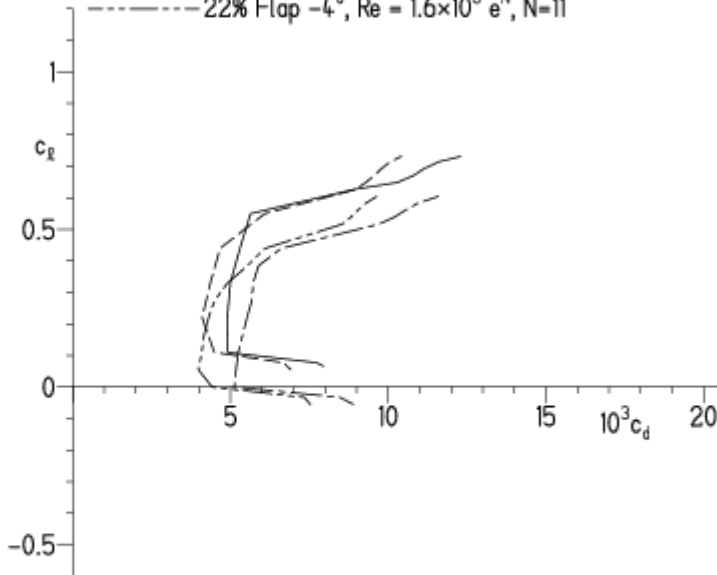
EPPLER 2005 V. 8.5.07 RUN 23.3.12 16:30



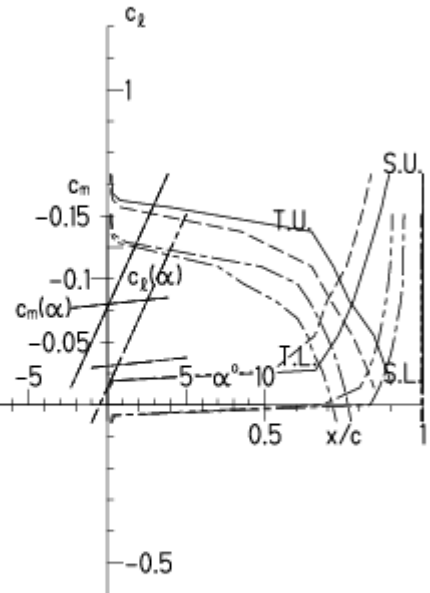
EPPLER 2005 V. 8.5.07 RUN 23.

HQ/DS-1,75/8 8%

- $Re = 0.8 \times 10^6 e^N, N=11$
- - - $1.6 \times 10^6 e^N, N=11$
- · - · - 22% Flap -4°, $Re = 0.8 \times 10^6 e^N, N=11$
- · - · - 22% Flap -4°, $Re = 1.6 \times 10^6 e^N, N=11$

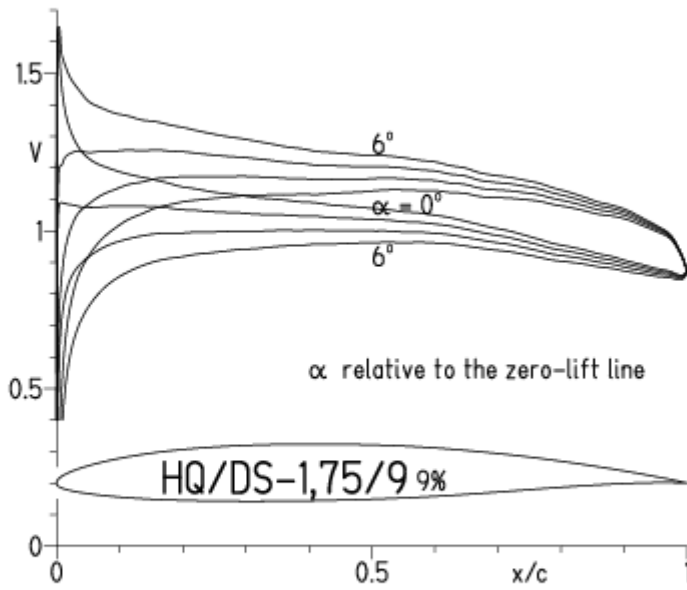


- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface



HQ/DS-1,75/9-Polaren, N=11

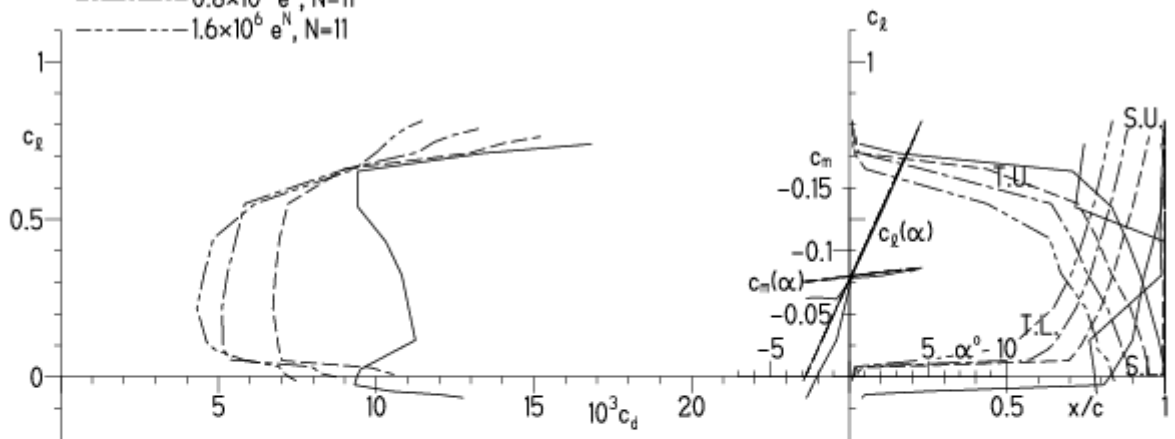
EPPLER 2005 V. 8.5.07 RUN 23.3.12 17:07



EPPLER 2005 V. 8.5.07 RUN 23.3.12 17:07

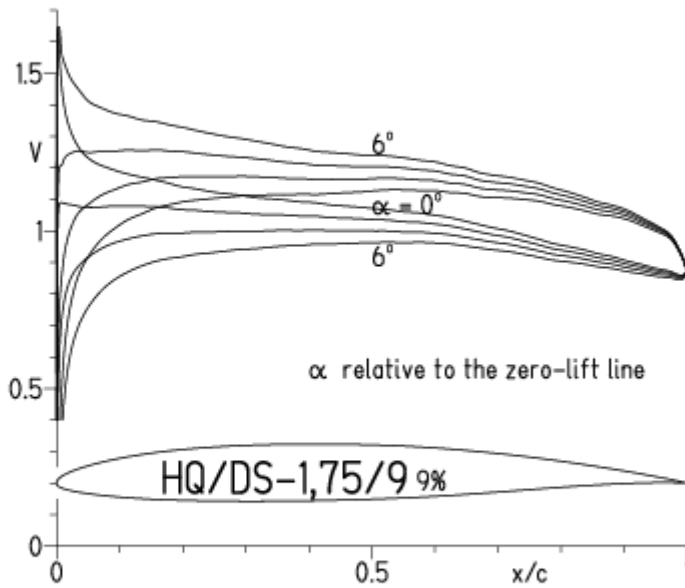
HQ/DS-1,75/9 9%

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

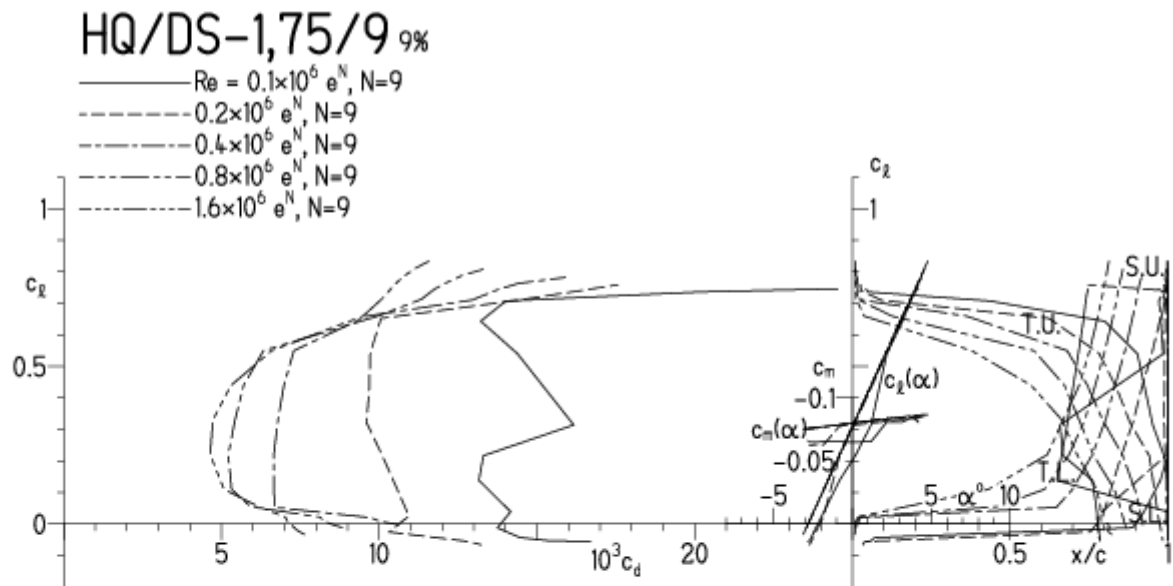


HQ/DS-1,75/9-Polaren, N=9

EPPLER 2005 V. 8.5.07 RUN 23.3.12 17:16

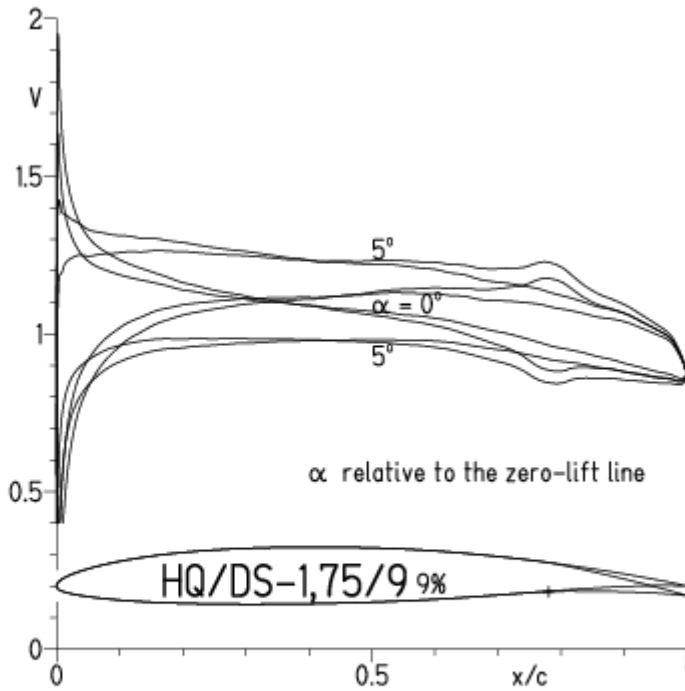


EPPLER 2005 V. 8.5.07 RUN 23.3.12 17:16



HQ/DS-1,75/9-Polaren, N=11, mit 4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 23.3.12 17:50

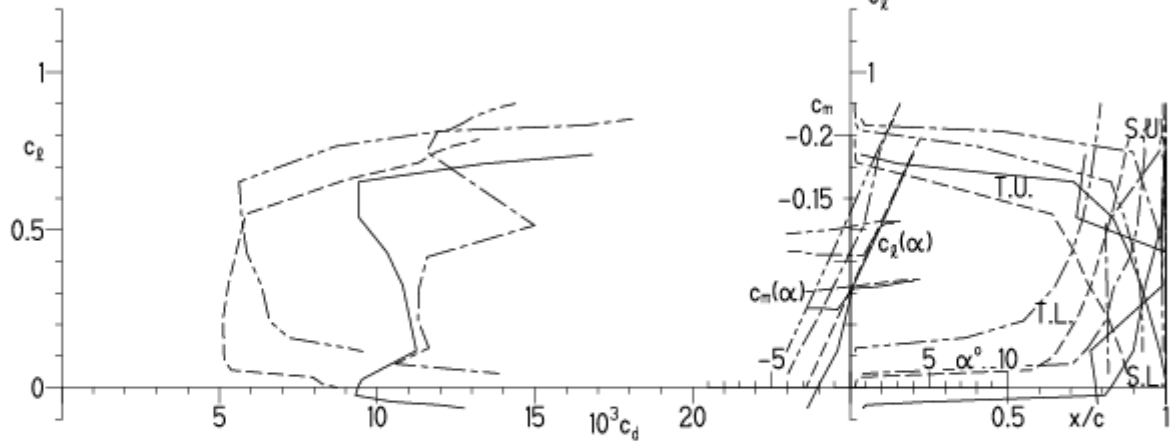


EPPLER 2005 V. 8.5.07 RUN 23.3.12 17:50

HQ/DS-1,75/9 9%

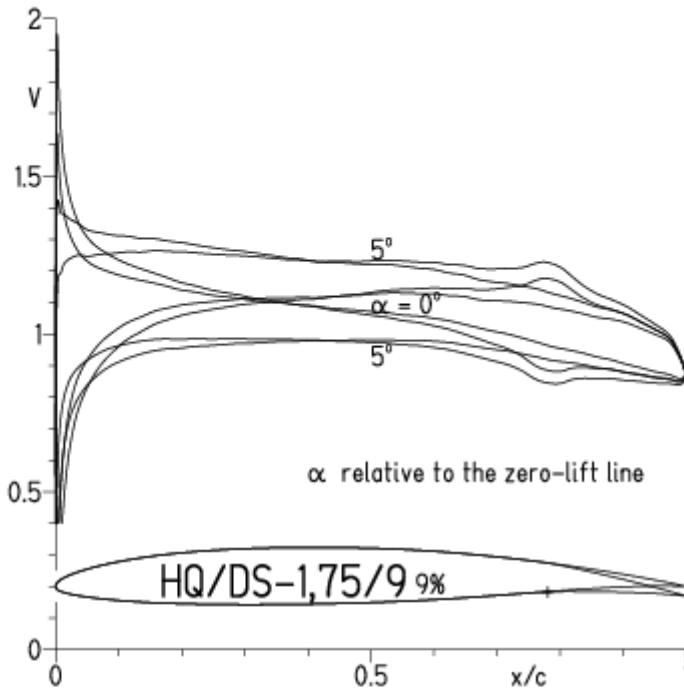
- $Re = 0.2 \times 10^6 e^N, N=11$
- - - $0.8 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.2 \times 10^6 e^N, N=11$
- · - · 22% Flap $4^\circ, Re = 0.8 \times 10^6 e^N, N=11$

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



HQ/DS-1,75/9-Polaren, N=9, mit 4° Wölbklappenausschlag, Turbulatoreffekt
 (optimale Turbulatorposition bei 45 – 55 % Profiltiefe, für schmale Aussenflügel)

EPPLER 2005 V. 8.5.07 RUN 23.3.12 17:57

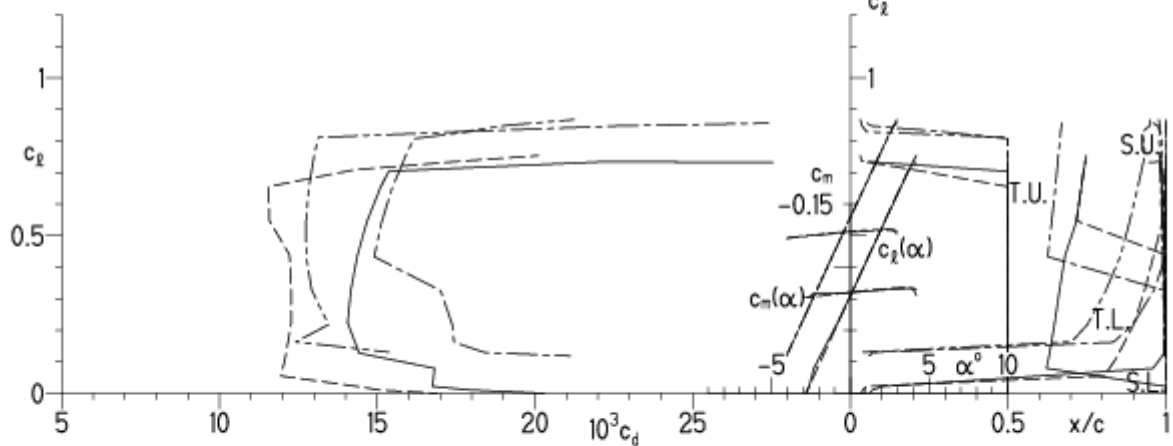


EPPLER 2005 V. 8.5.07 RUN 23.3.12 17:57

HQ/DS-1,75/9 9%

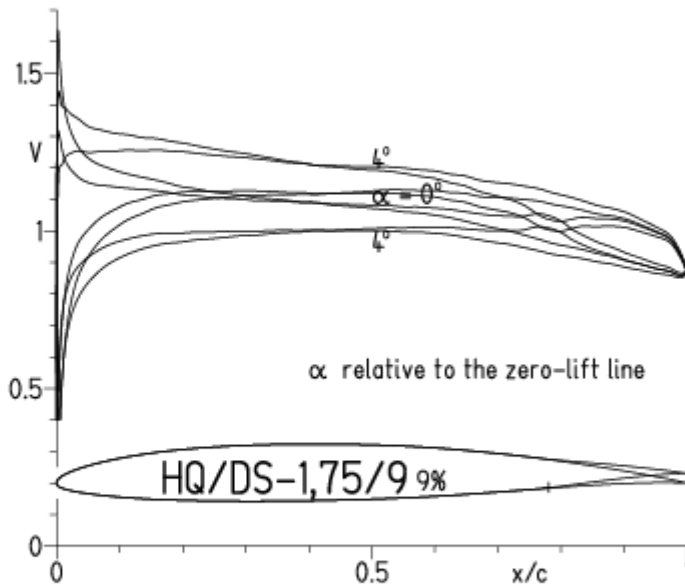
- Re = 75 000, Turb. upper 50% e^N, N=9
- - - 0.15×10⁶, Turb. upper 50% e^N, N=9
- · - 22% Flap 4°, Re = 75 000, Turb. upper 50% e^N, N=9
- · - 22% Flap 4°, Re = 0.15×10⁶, Turb. upper 50% e^N, N=9

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

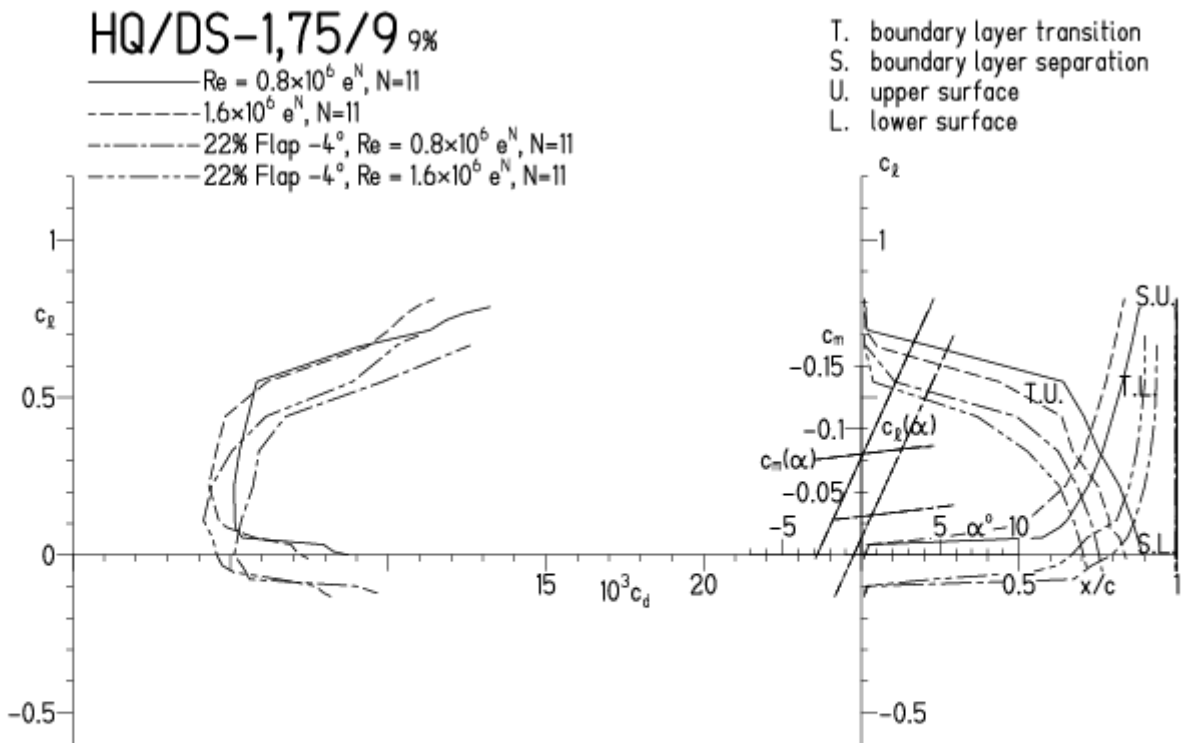


HQ/DS-1,75/9-Polaren, N=11, mit -4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 23.3.12 18:14

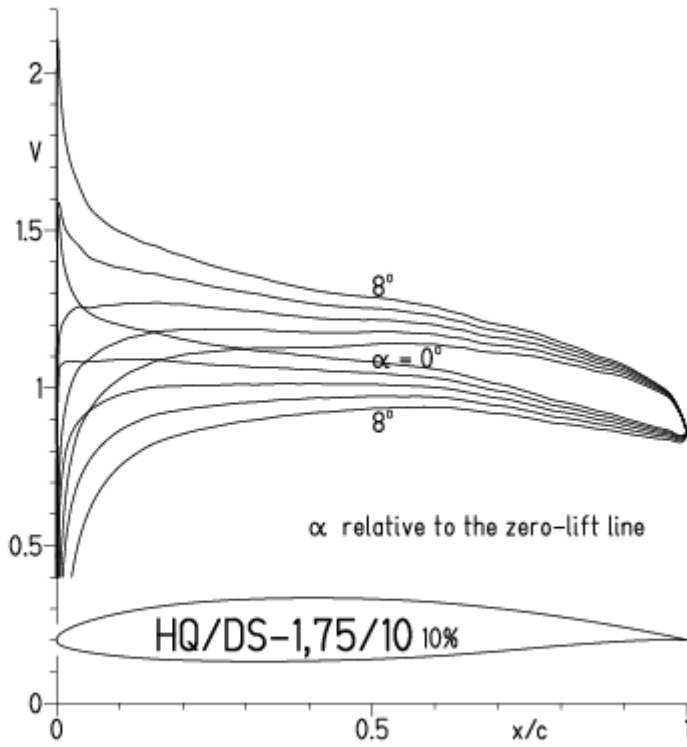


EPPLER 2005 V. 8.5.07 RUN 23.3.12 18:14

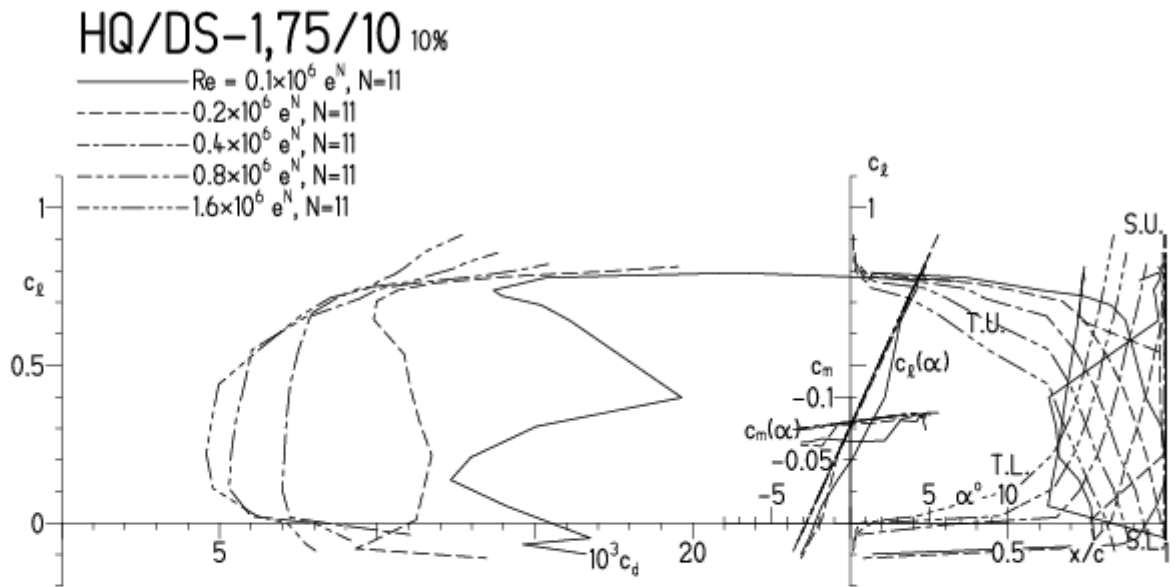


HQ/DS-1,75/10-Polaren, N=11

EPPLER 2005 V. 8.5.07 RUN 25.3.02 18:42

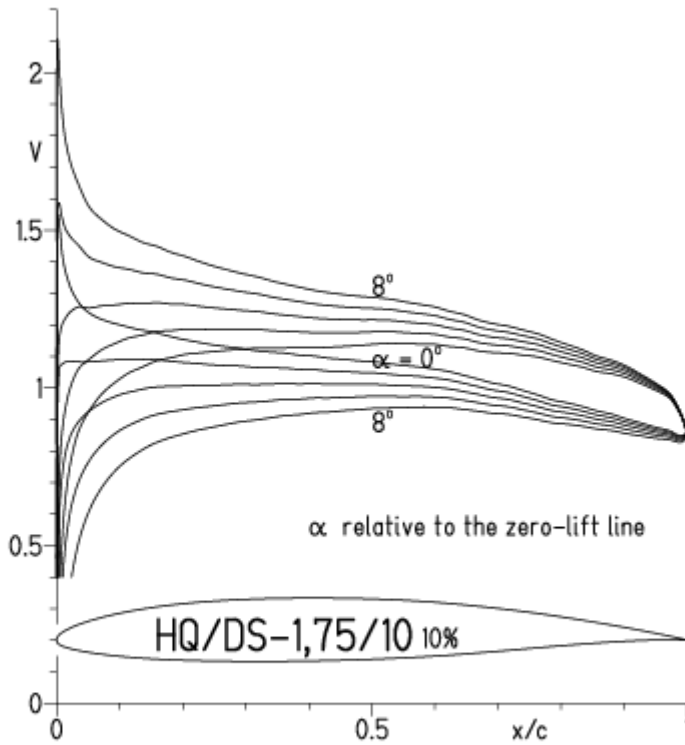


EPPLER 2005 V. 8.5.07 RUN 25.3.02 18:42

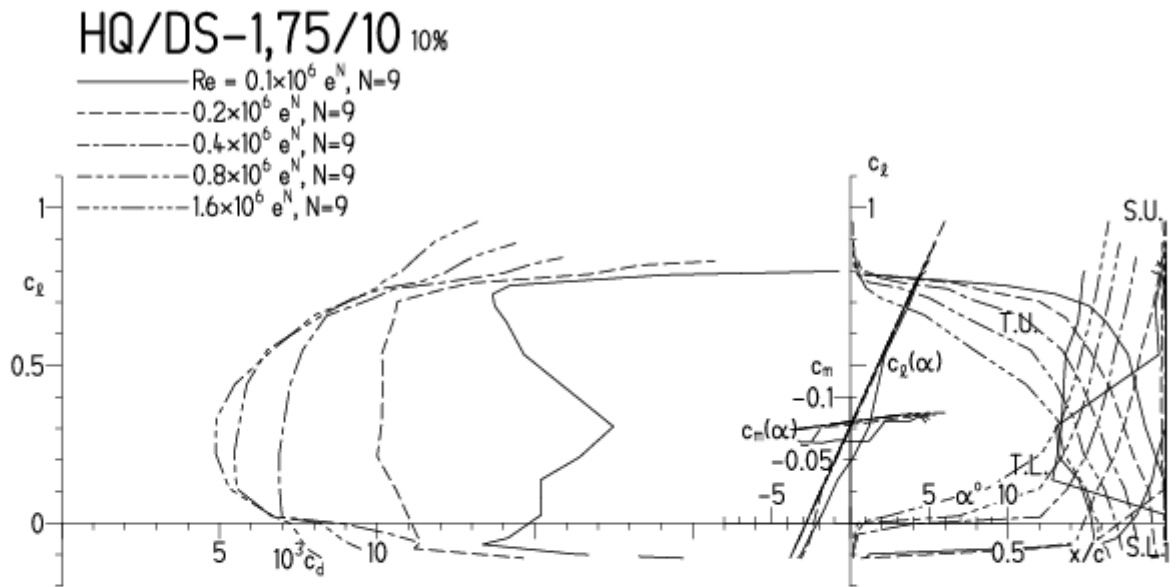


HQ/DS-1,75/10-Polaren, N=9

EPPLER 2005 V. 8.5.07 RUN 25.3.12 18:56

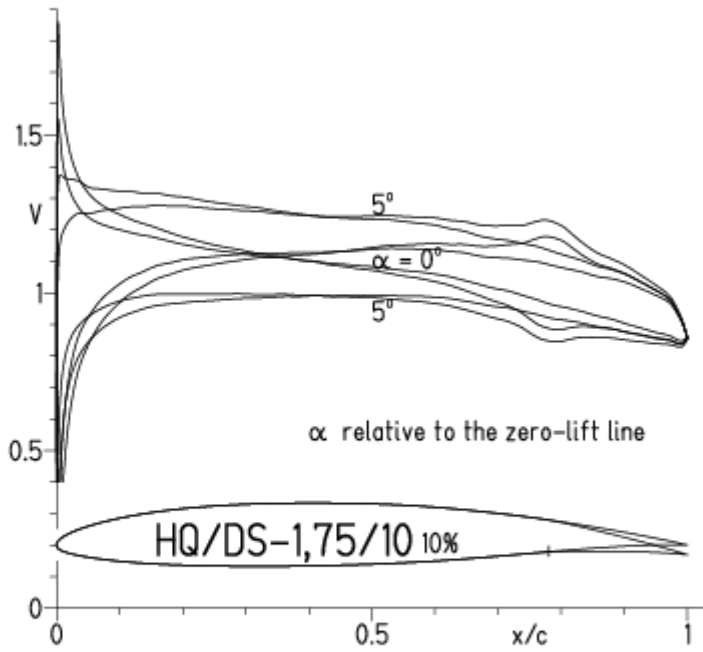


EPPLER 2005 V. 8.5.07 RUN 25.3.12 18:56



HQ/DS-1,75/10-Polaren, N=11, mit 4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 26.3.12 12:26

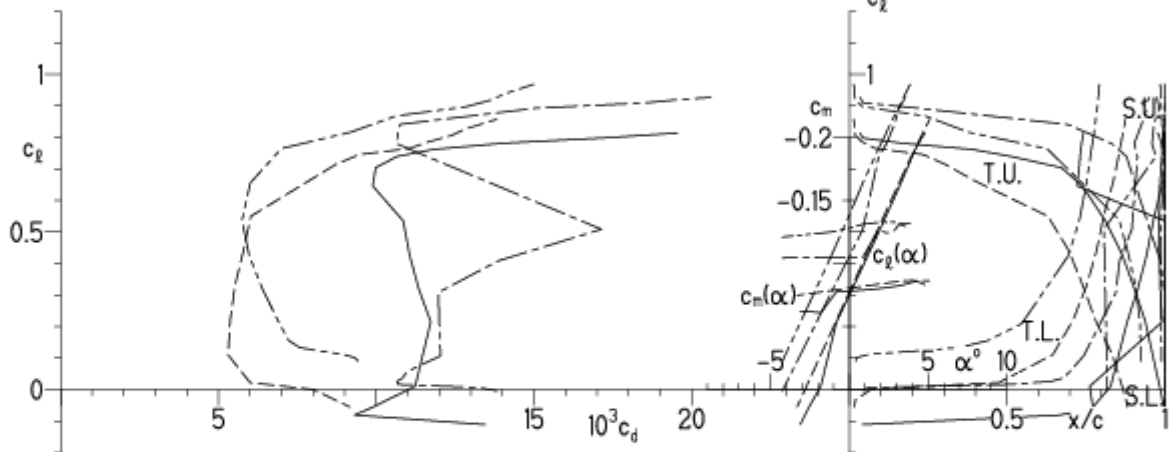


EPPLER 2005 V. 8.5.07 RUN 26.3.12 12:26

HQ/DS-1,75/10 10%

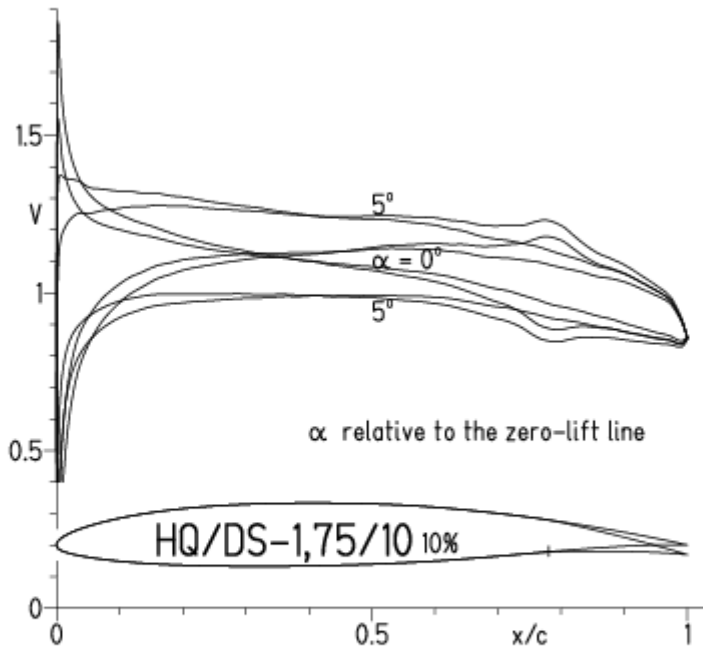
- $Re = 0.2 \times 10^6$ e^N, N=11
- - - 0.8×10^6 e^N, N=11
- · - · - 22% Flap 4°, $Re = 0.2 \times 10^6$ e^N, N=11
- · - · - 22% Flap 4°, $Re = 0.8 \times 10^6$ e^N, N=11

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



HQ/DS-1,75/10-Polaren, N=9, mit 4° Wölbklappenausschlag, Turbulatoreffekt
 (optimale Turbulatorposition bei 45 – 55 % Profiltiefe, für schmale Aussenflügel)

EPPLER 2005 V. 8.5.07 RUN 26.3.12 12:36

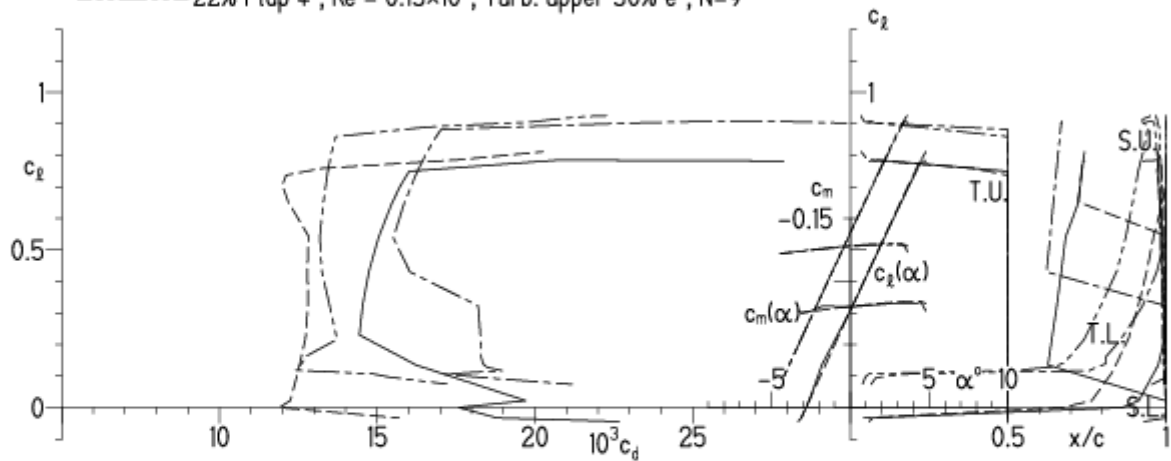


EPPLER 2005 V. 8.5.07 RUN 26.3.1

HQ/DS-1,75/10 10%

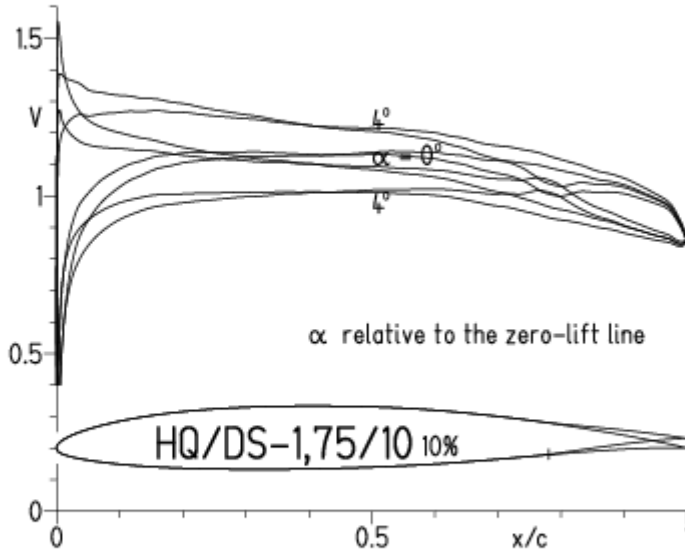
- $Re = 75\,000$, Turb. upper 50% e^N , $N=9$
- - - 0.15×10^6 , Turb. upper 50% e^N , $N=9$
- · - · 22% Flap 4° , $Re = 75\,000$, Turb. upper 50% e^N , $N=9$
- · - · 22% Flap 4° , $Re = 0.15 \times 10^6$, Turb. upper 50% e^N , $N=9$

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

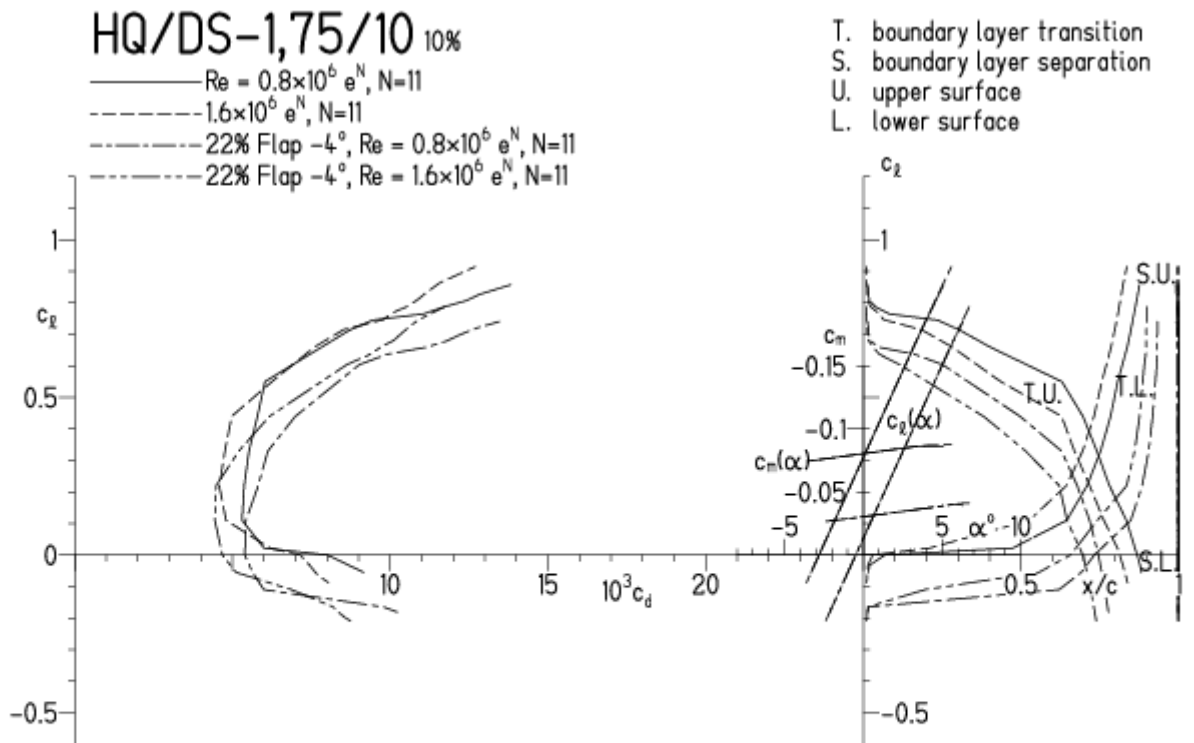


HQ/DS-1,75/10-Polaren, N=11, mit -4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 26.3.12 12:53

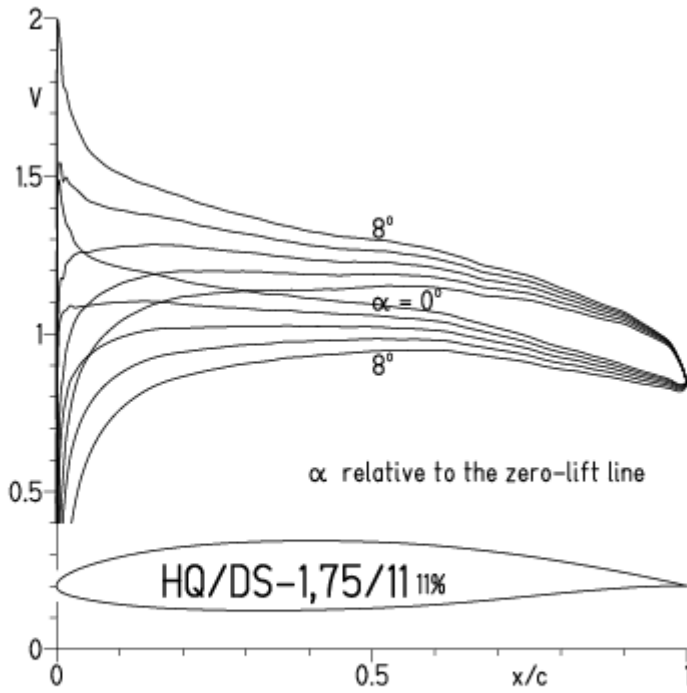


EPPLER 2005 V. 8.5.07 RUN 26.3.12 12:53

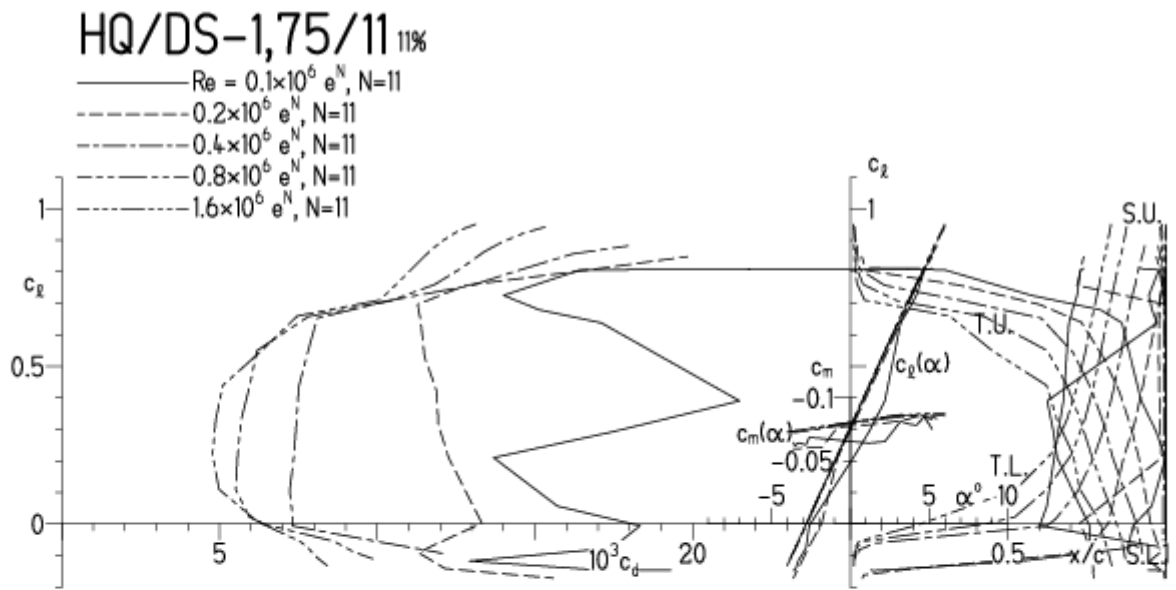


HQ/DS-1,75/11-Polaren, N=11

EPPLER 2005 V. 8.5.07 RUN 26.3.12 13:12

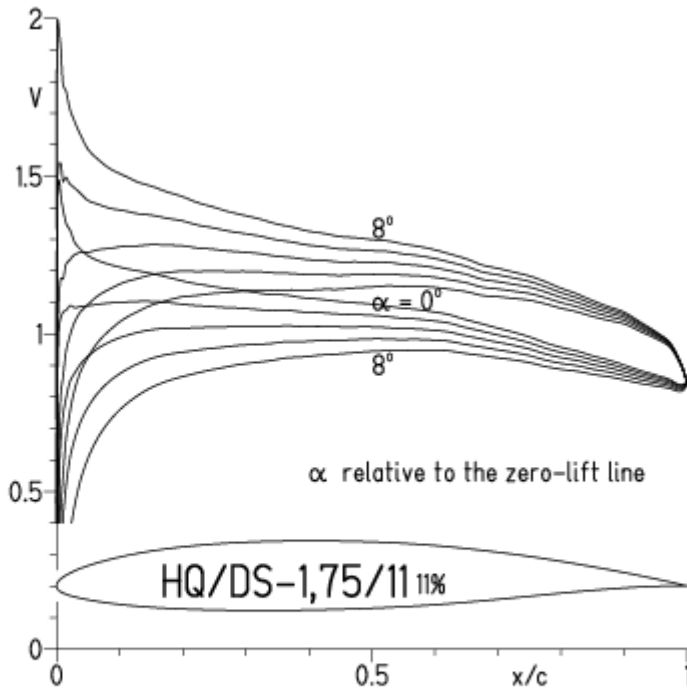


EPPLER 2005 V. 8.5.07 RUN 26.3.12 13:12

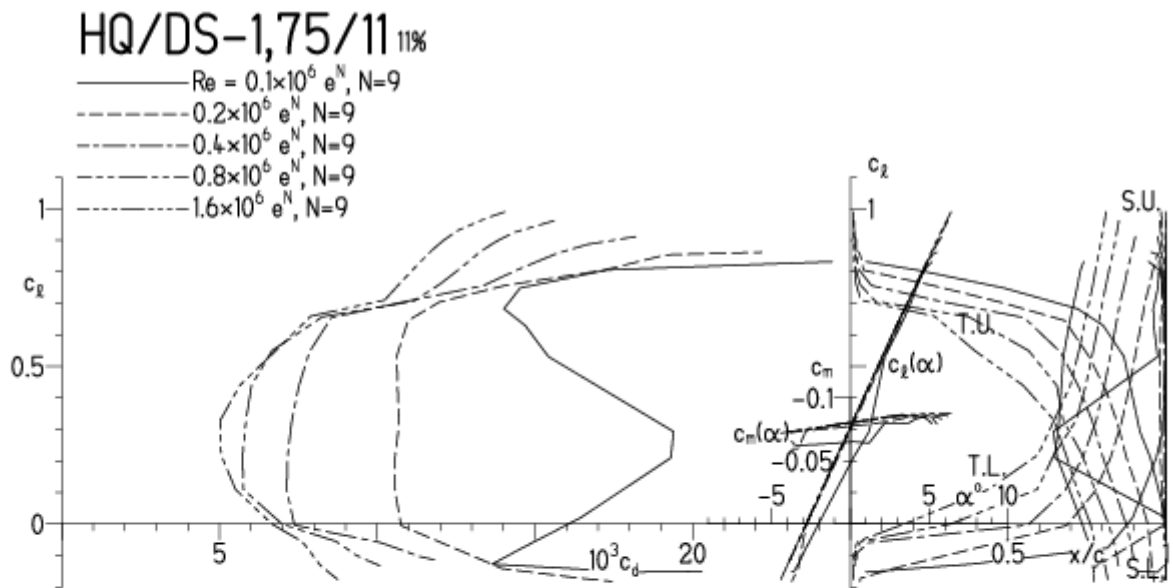


HQ/DS-1,75/11-Polaren, N=9

EPPLER 2005 V. 8.5.07 RUN 26.3.12 13:25

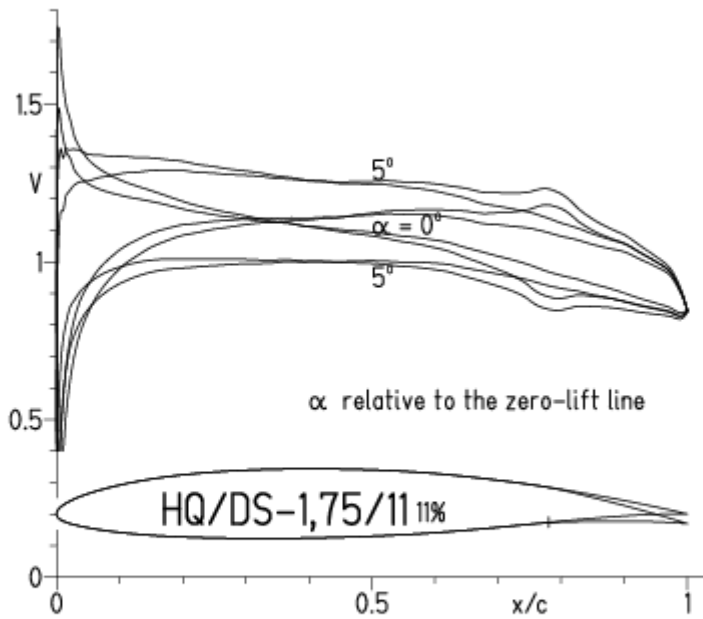


EPPLER 2005 V. 8.5.07 RUN 26.3.12 13:25



HQ/DS-1,75/11-Polaren, N=11, mit 4° Wöbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 26.3.12 15:53

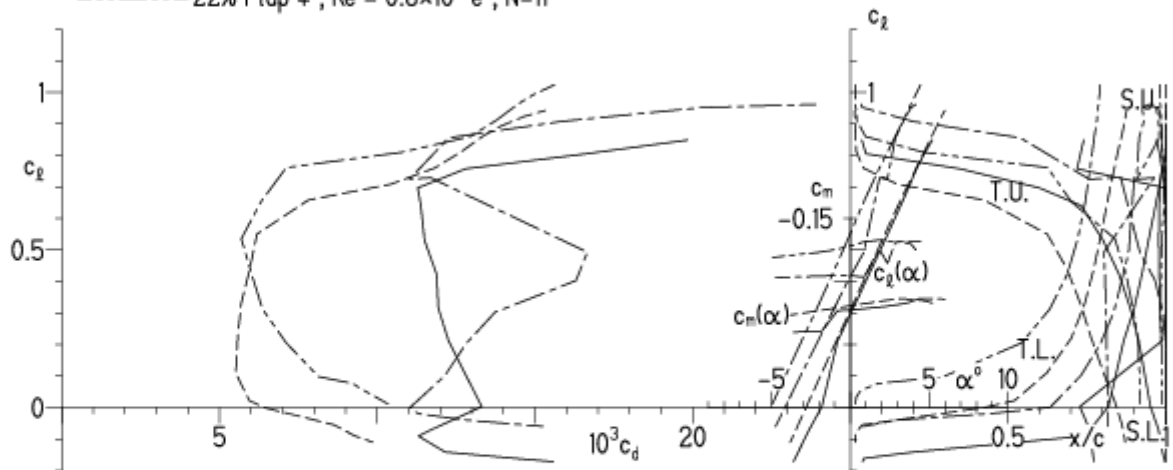


EPPLER 2005 V. 8.5.07 RUN 26.3.12 15:53

HQ/DS-1,75/11 11%

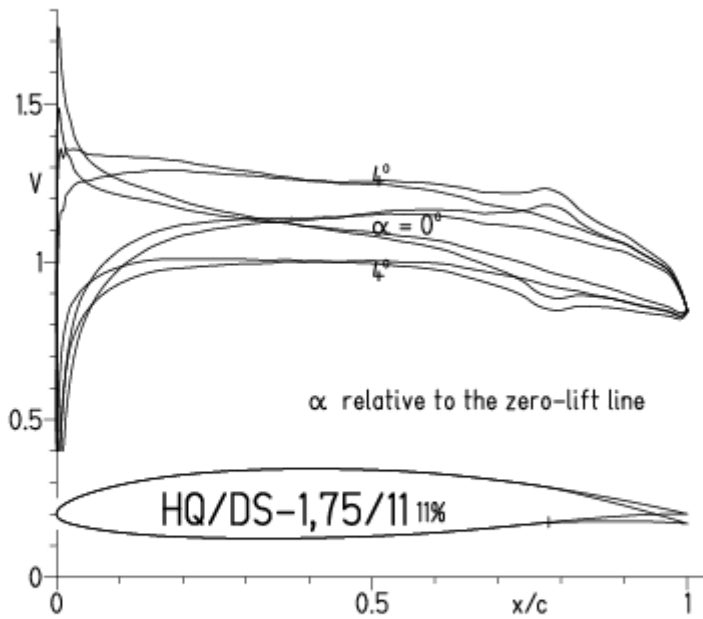
- $Re = 0.2 \times 10^6$ e^N, N=11
- - - 0.8×10^6 e^N, N=11
- · - · - 22% Flap 4°, $Re = 0.2 \times 10^6$ e^N, N=11
- · - · - 22% Flap 4°, $Re = 0.8 \times 10^6$ e^N, N=11

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



HQ/DS-1,75/11-Polaren, N=9, mit 5° Wölbklappenausschlag, Turbulatoreffekt
 (optimale Turbulatorposition bei 45 – 55 % Profiltiefe, für schmale Aussenflügel)

EPPLER 2005 V. 8.5.07 RUN 26.3.12 16:05

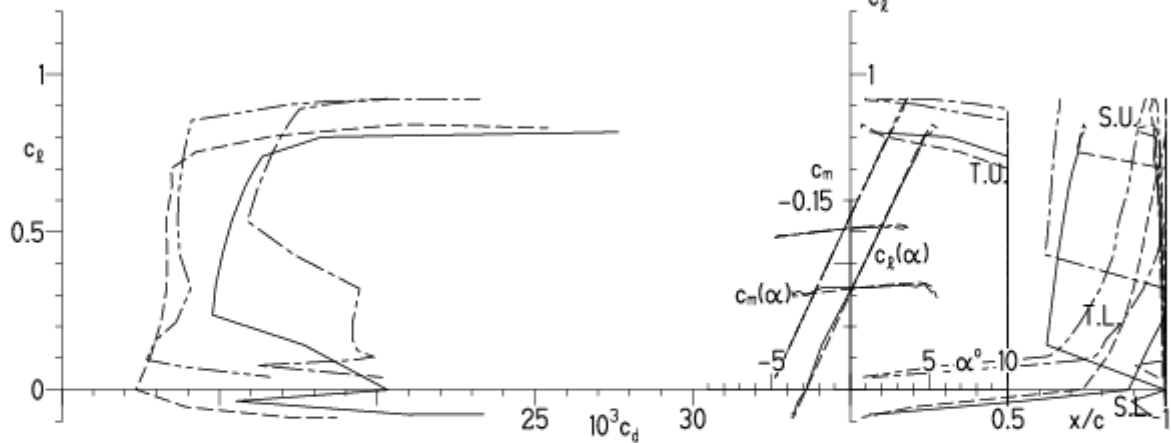


EPPLER 2005 V. 8.5.07 RUN 26.3.12 16:05

HQ/DS-1,75/11 11%

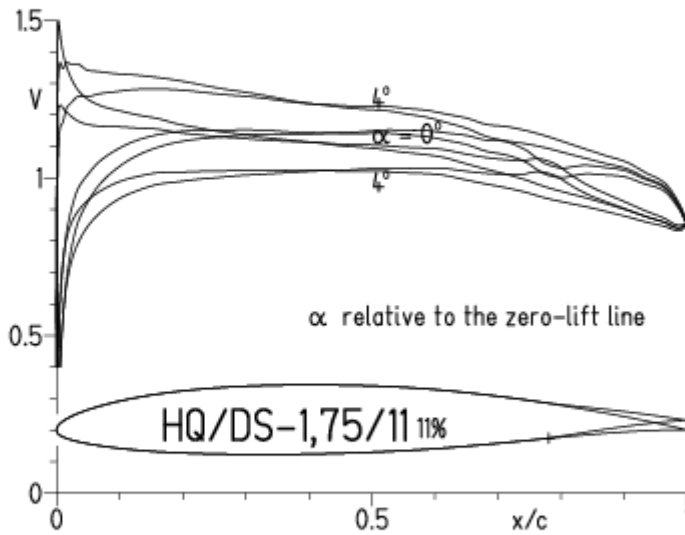
- $Re = 75\,000$, Turb. upper 50% e^N , $N=9$
- - - 0.15×10^6 , Turb. upper 50% e^N , $N=9$
- · - · 22% Flap 4° , $Re = 75\,000$, Turb. upper 50% e^N , $N=9$
- · - · 22% Flap 4° , $Re = 0.15 \times 10^6$, Turb. upper 50% e^N , $N=9$

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

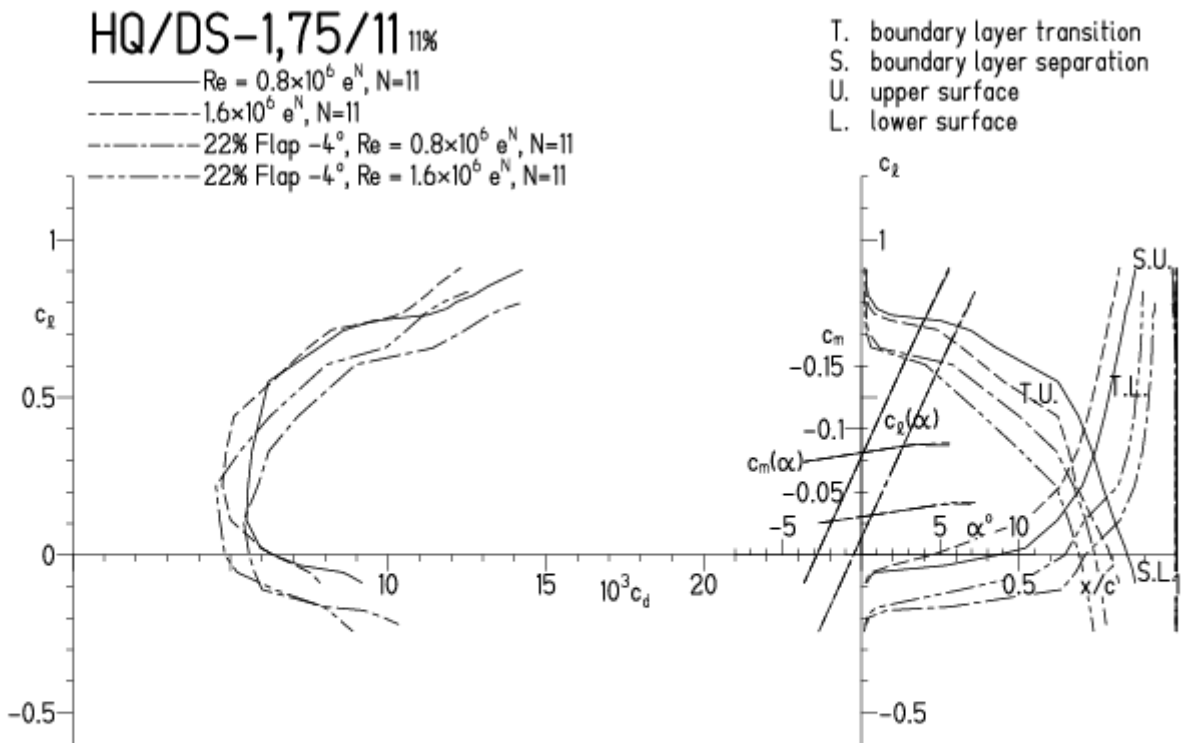


HQ/DS-1,75/11-Polaren, N=11, mit -4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 26.3.12 17:28

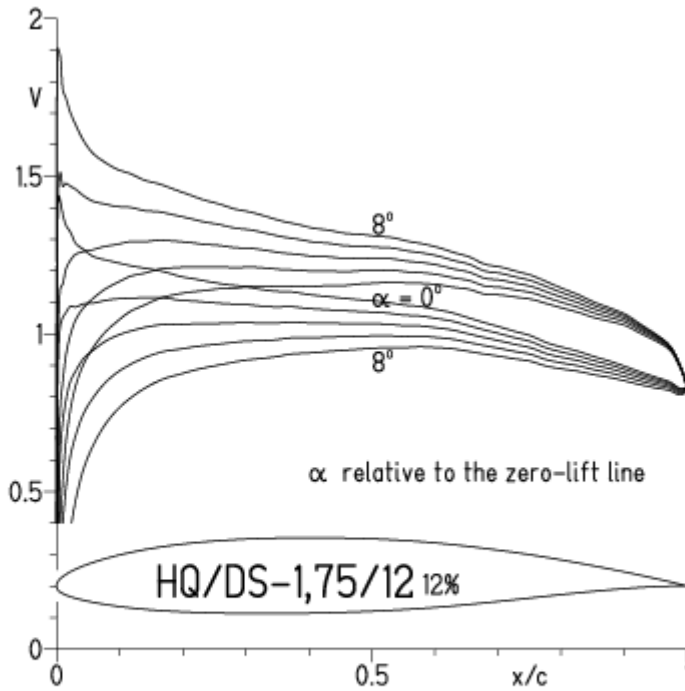


EPPLER 2005 V. 8.5.07 RUN 26.3.12 17:28

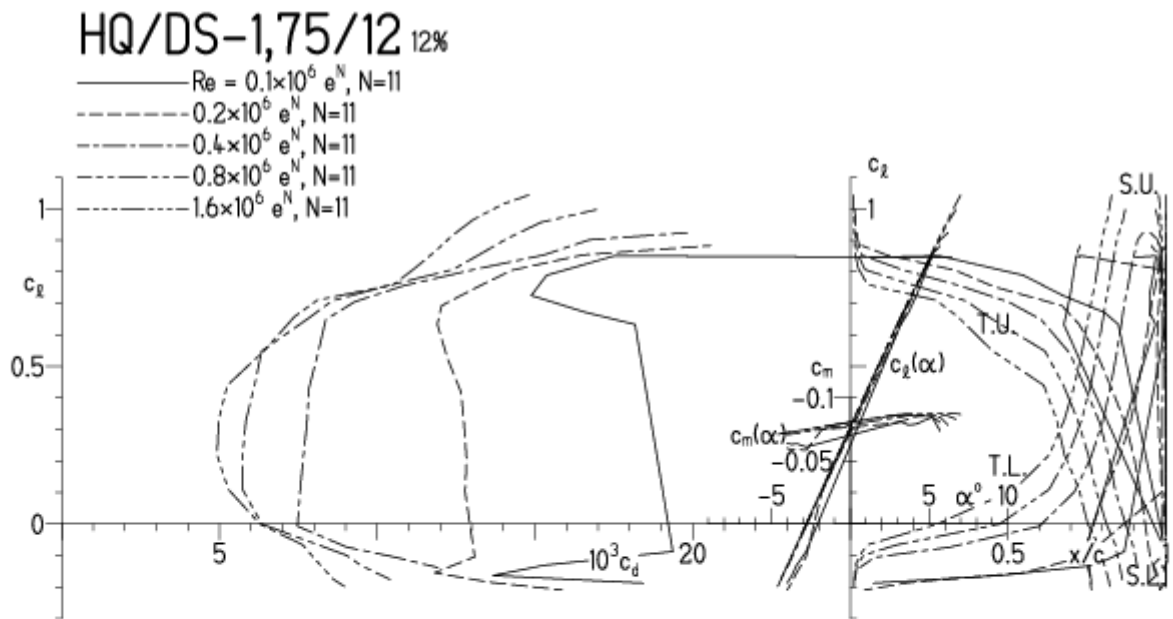


HQ/DS-1,75/12-Polaren, N=11

EPPLER 2005 V. 8.5.07 RUN 26.3.12 17:47

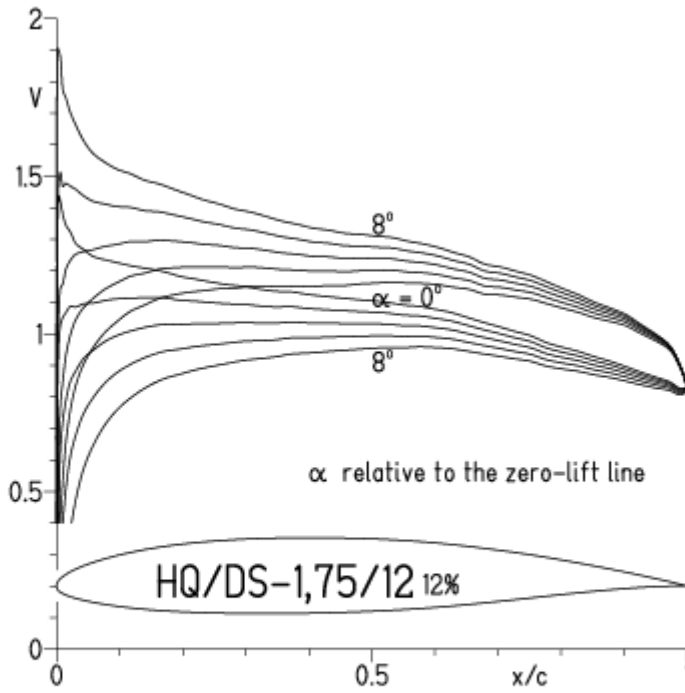


EPPLER 2005 V. 8.5.07 RUN 26.3.12 17:47



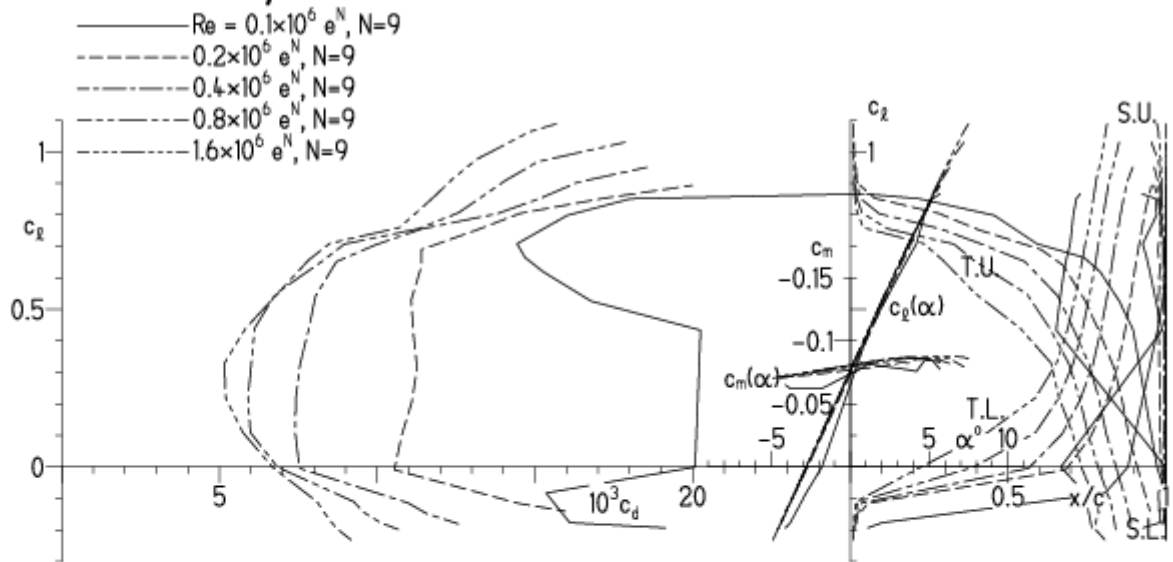
HQ/DS-1,75/12-Polaren, N=9

EPPLER 2005 V. 8.5.07 RUN 26.3.12 18:09



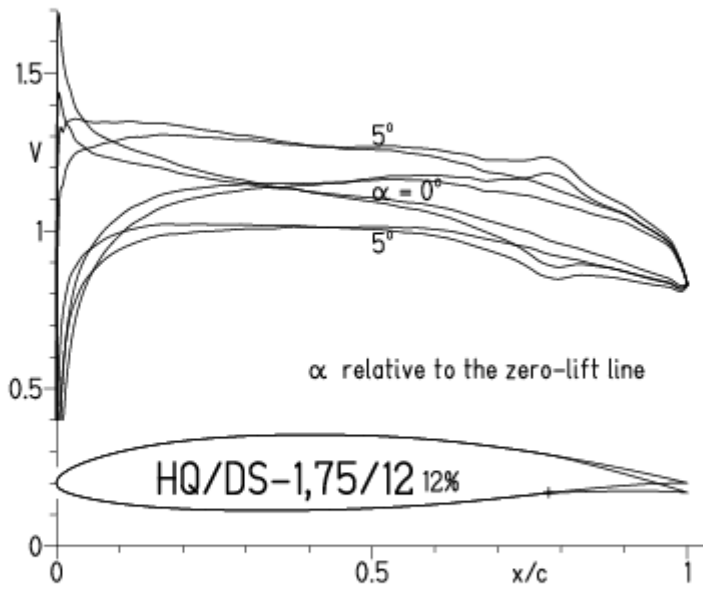
EPPLER 2005 V. 8.5.07 RUN 26.3.12 18:09

HQ/DS-1,75/12 12%



HQ/DS-1,75/12-Polaren, N=11, mit 4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 26.3.12 18:22

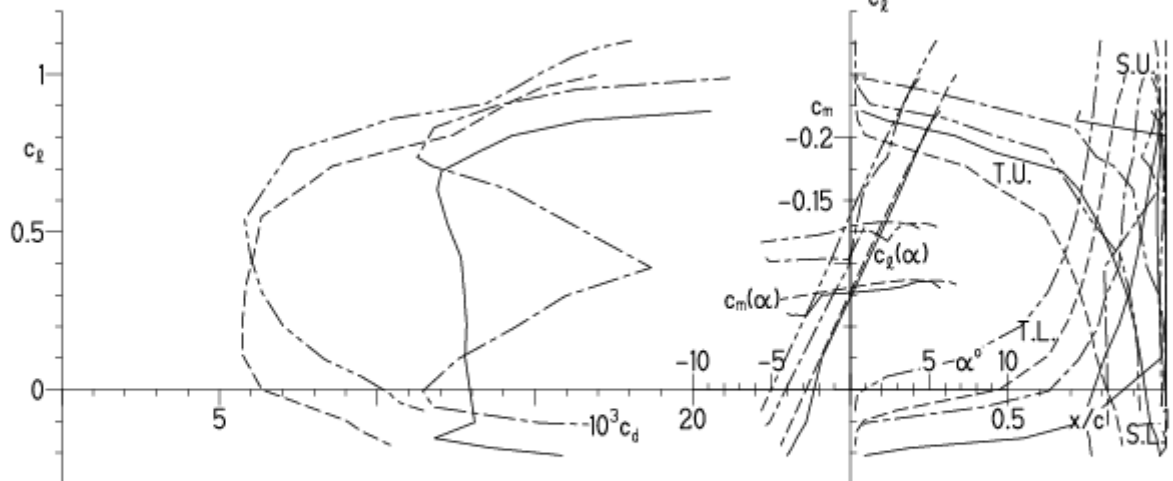


EPPLER 2005 V. 8.

HQ/DS-1,75/12 12%

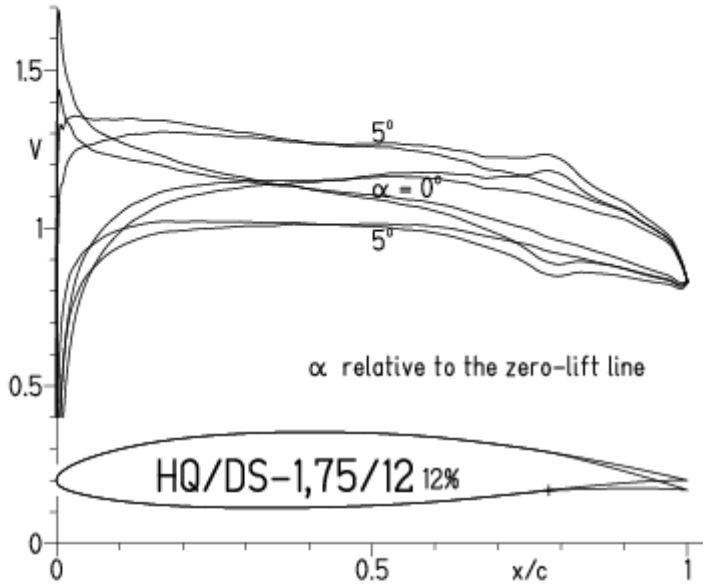
- $Re = 0.2 \times 10^6$ e^N, N=11
- - - 0.8×10^6 e^N, N=11
- · - · - 22% Flap 4°, $Re = 0.2 \times 10^6$ e^N, N=11
- · - · - 22% Flap 4°, $Re = 0.8 \times 10^6$ e^N, N=11

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



HQ/DS-1,75/12-Polaren, N=9, mit 4° Wölbklappenausschlag, Turbulatoreffekt
 (optimale Turbulatorposition bei 45 – 55 % Profiltiefe, für schmale Aussenflügel)

EPPLER 2005 V. 8.5.07 RUN 26.3.12 18:37

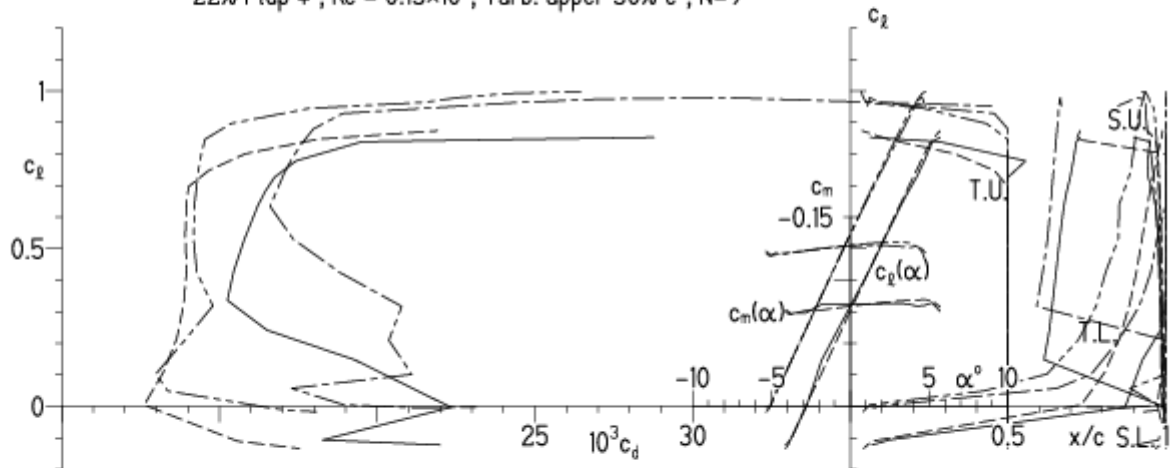


EPPLER 2005 V. 8.5.0

HQ/DS-1,75/12 12%

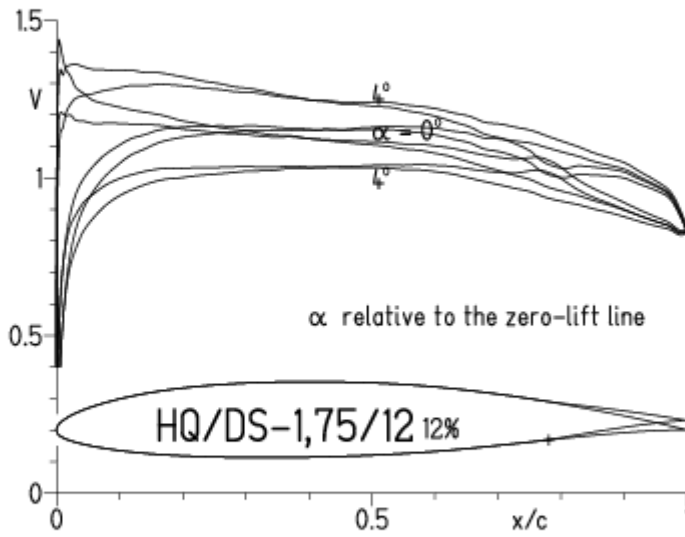
- $Re = 75\,000$, Turb. upper 50% e^N , $N=9$
- - - 0.15×10^6 , Turb. upper 50% e^N , $N=9$
- · - 22% Flap 4° , $Re = 75\,000$, Turb. upper 50% e^N , $N=9$
- · - 22% Flap 4° , $Re = 0.15 \times 10^6$, Turb. upper 50% e^N , $N=9$

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



HQ/DS-1,75/12-Polaren, N=11, mit -4° Wölbklappenausschlag

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