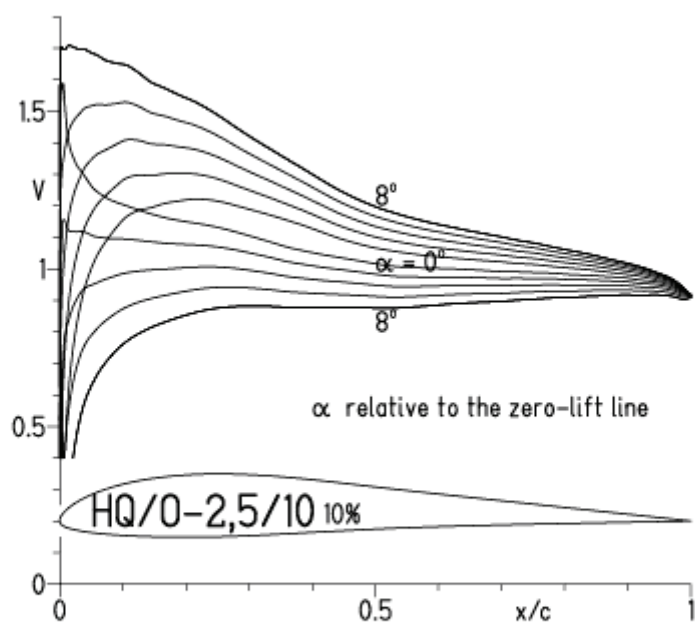
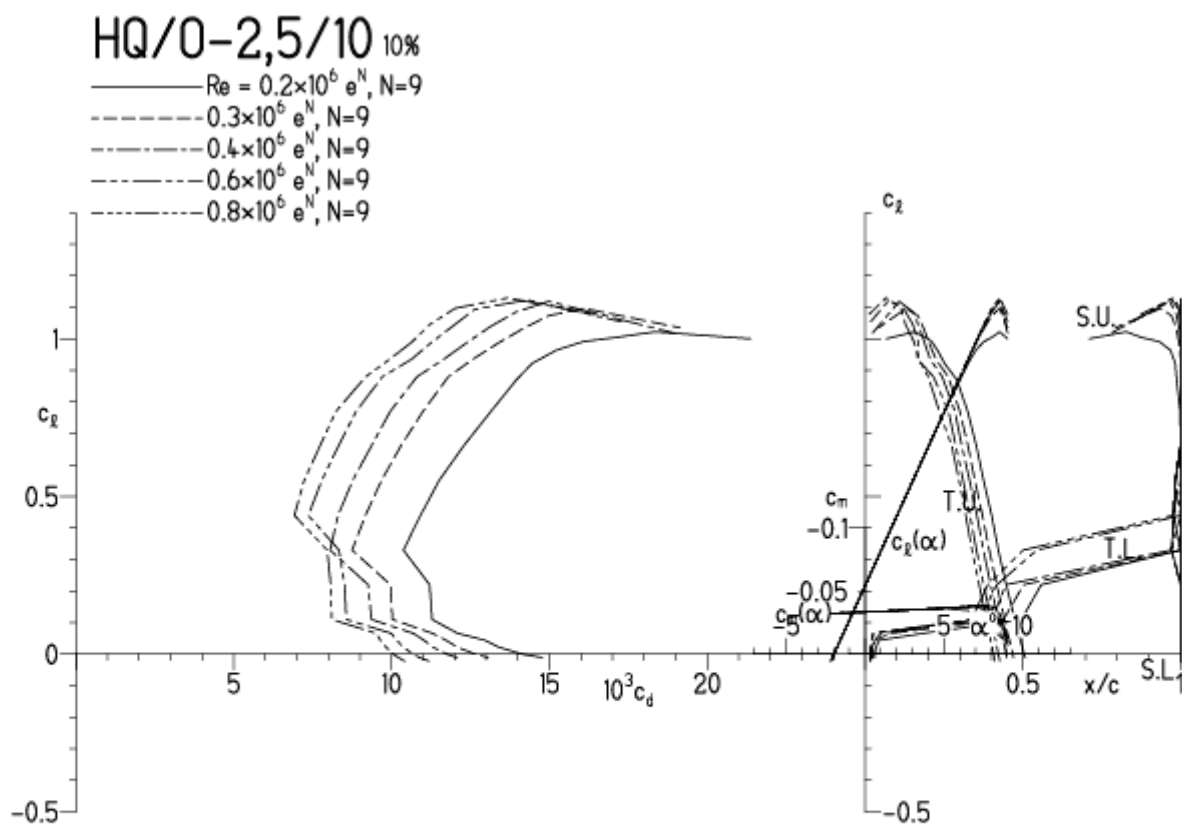


HQ/OLDY-2,5/10, N=9

EPPLER 2005 V. 8.5.07 RUN 6.6.12 18:45

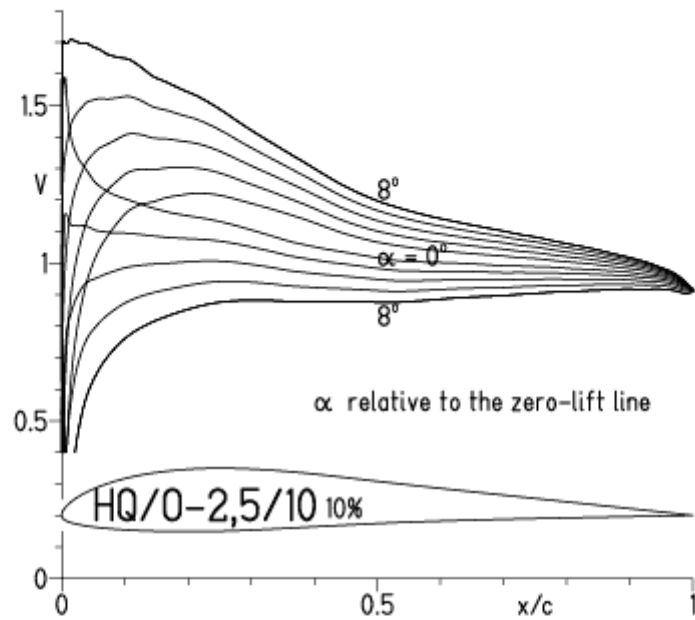


EPPLER 2005 V. 8.5.07 RUN 6.6.12 18:45



HQ/OLDY-2,5/10, $N=9$, Turbulatoreffekt bei niedrigen Re-Zahlen
(optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

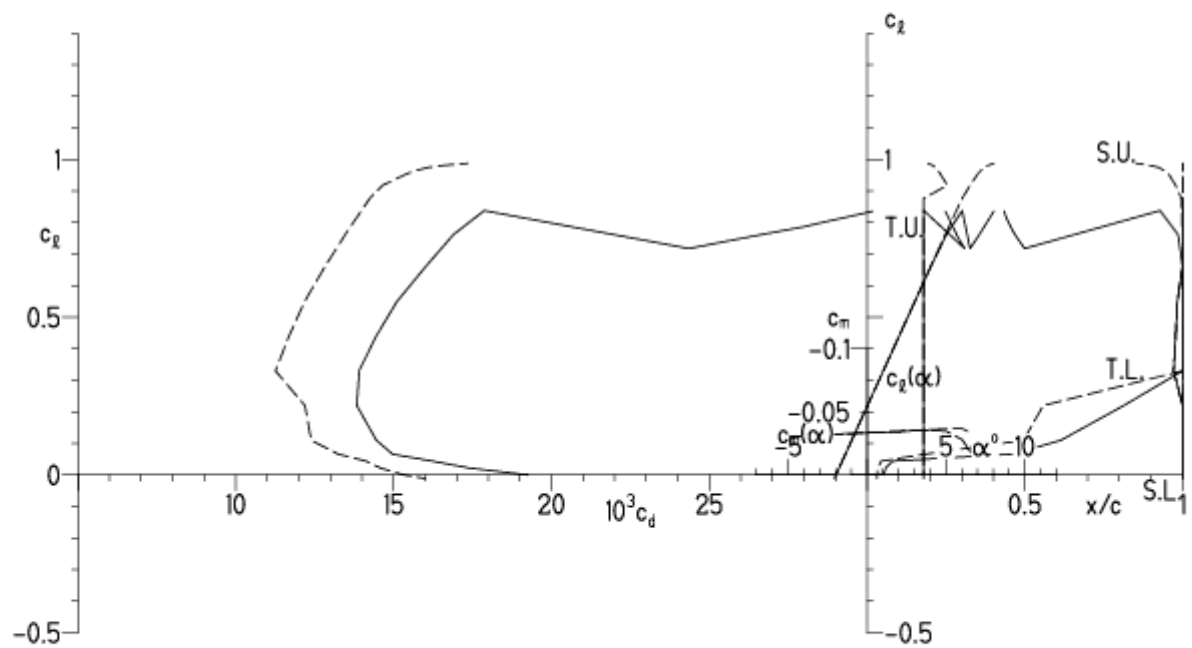
EPPLER 2005 V. 8.5.07 RUN 30.4.12 11:43



EPPLER 2005 V. 8.5.07 RUN 30.4.12 11:43

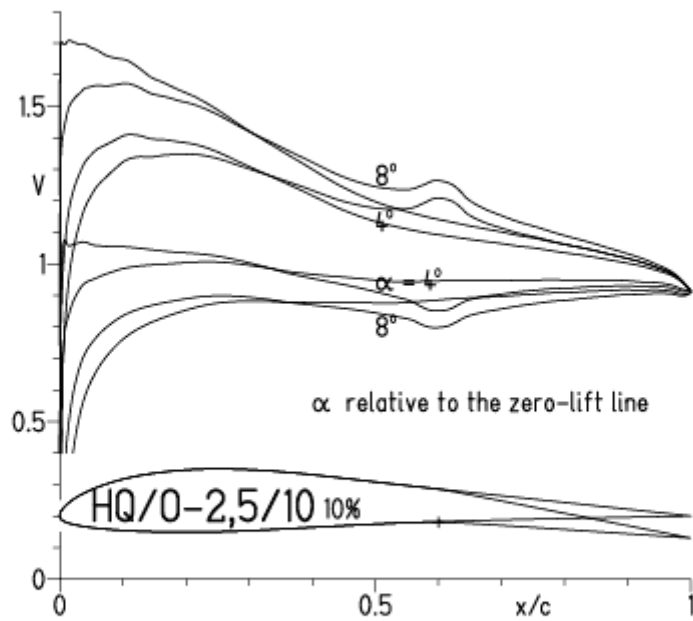
HQ/0-2,5/10 10%

— $Re = 0.1 \times 10^6$, Turb. upper 18% e^N , $N=9$
 - - - 0.2×10^6 , Turb. upper 18% e^N , $N=9$

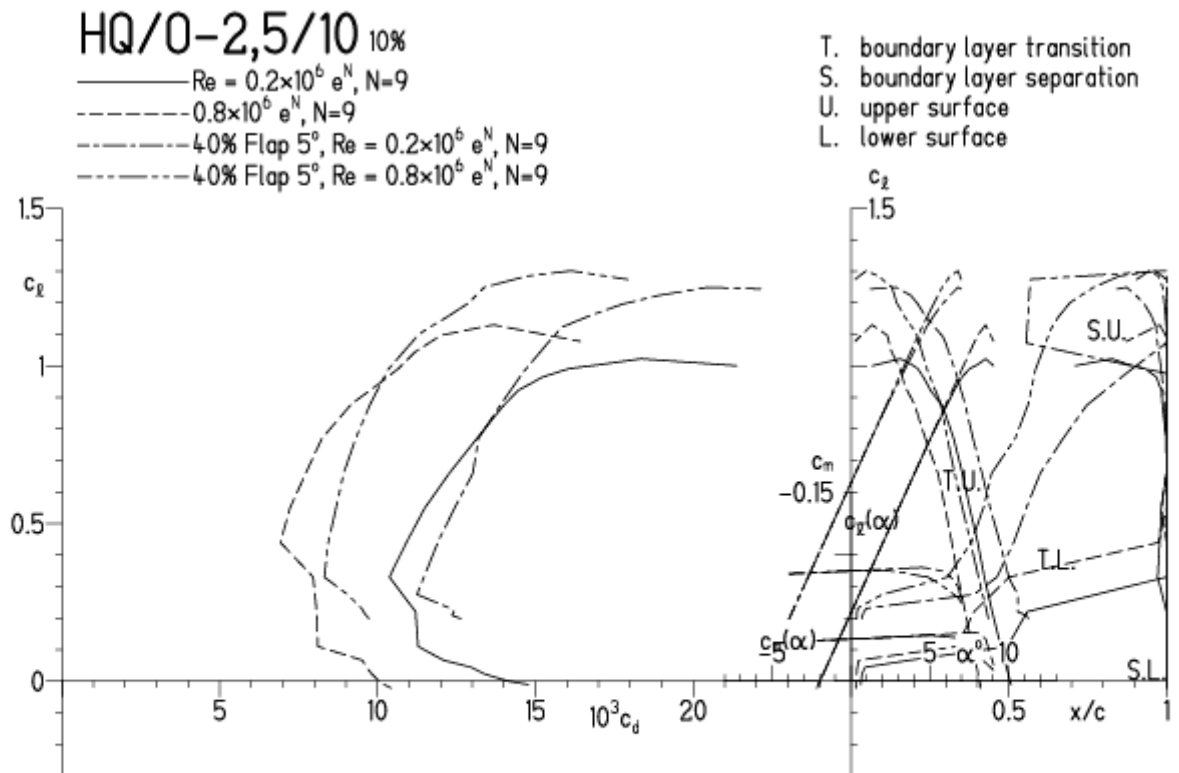


HQ/OLDY-2,5/10, $N=9$, mit 5° Wölbklappenausschlag, Wölbklappentiefe 40 % von l

EPPLER 2005 V. 8.5.07 RUN 1.5.12 10:37

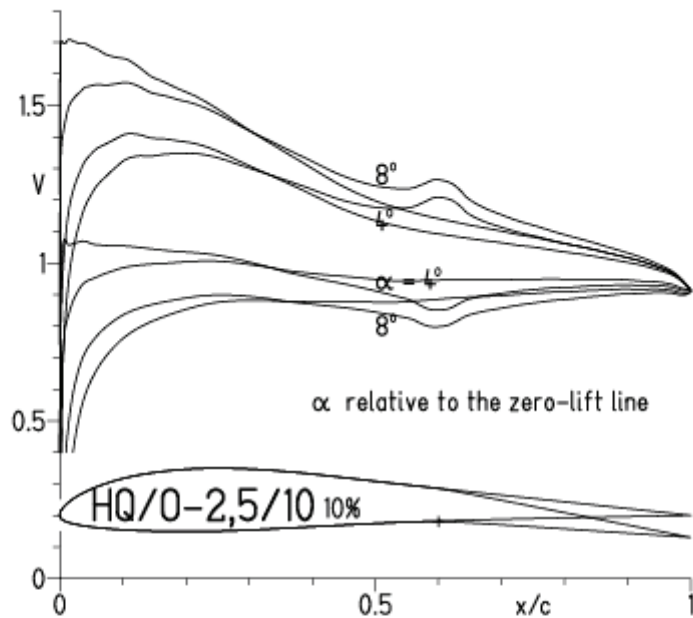


EPPLER 2005 V. 8.5.07 RUN 1.5.12 10:37



HQ/OLDY-2,5/10, $N=9$, mit 5° Wölbklappenausschlag, $l_k = 0,4 \cdot l$, Turbulatoreffekt
(optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

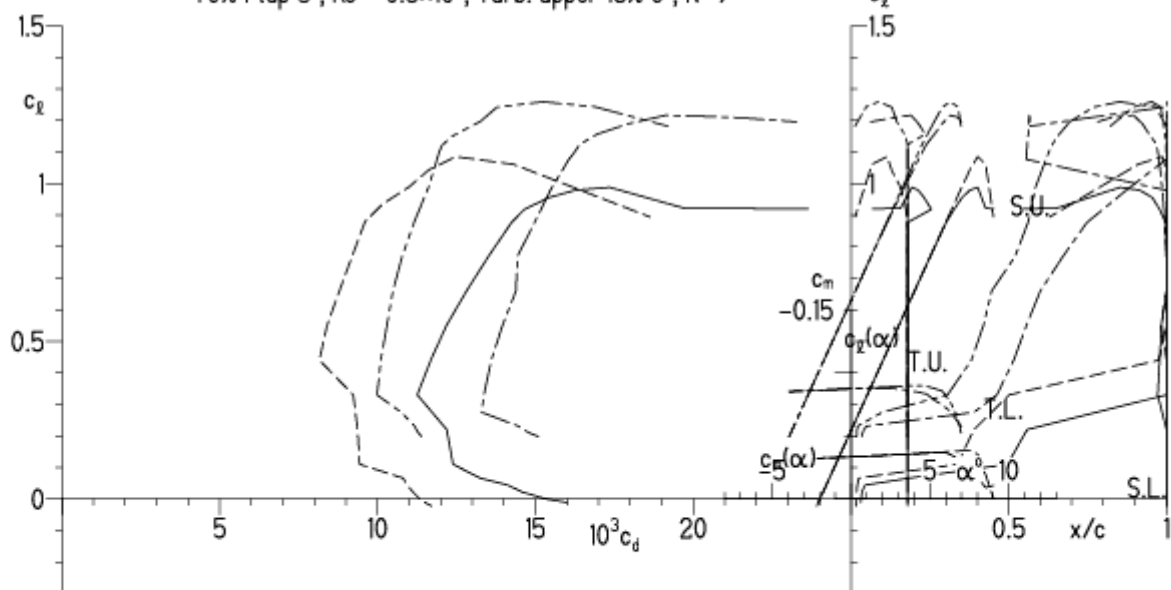
EPPLER 2005 V. 8.5.07 RUN 30.4.12 13:28



EPPLER 2005 V. 8.5.07 RUN 30.4.12 13:28

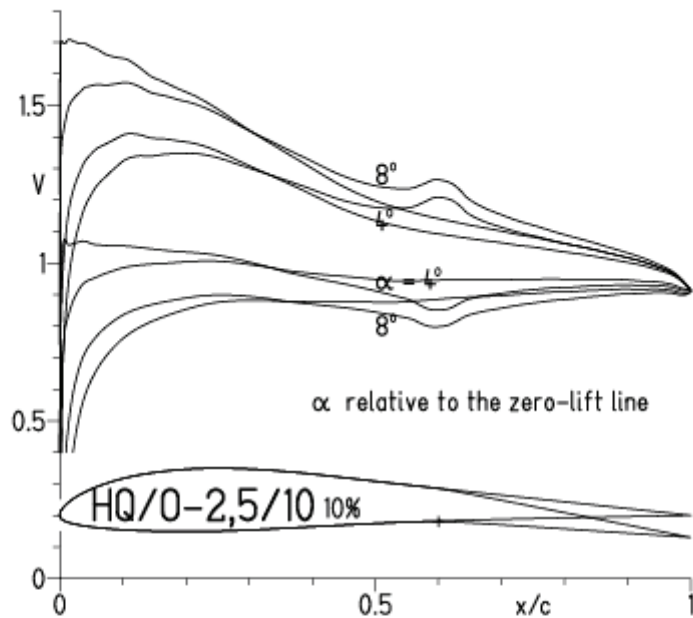
HQ/0-2,5/10 10%

- $Re = 0.2 \times 10^6$, Turb. upper 18% e^N , $N=9$
- - - 0.8×10^6 , Turb. upper 18% e^N , $N=9$
- · - 40% Flap 5° , $Re = 0.2 \times 10^6$, Turb. upper 18% e^N , $N=9$
- · - 40% Flap 5° , $Re = 0.8 \times 10^6$, Turb. upper 18% e^N , $N=9$

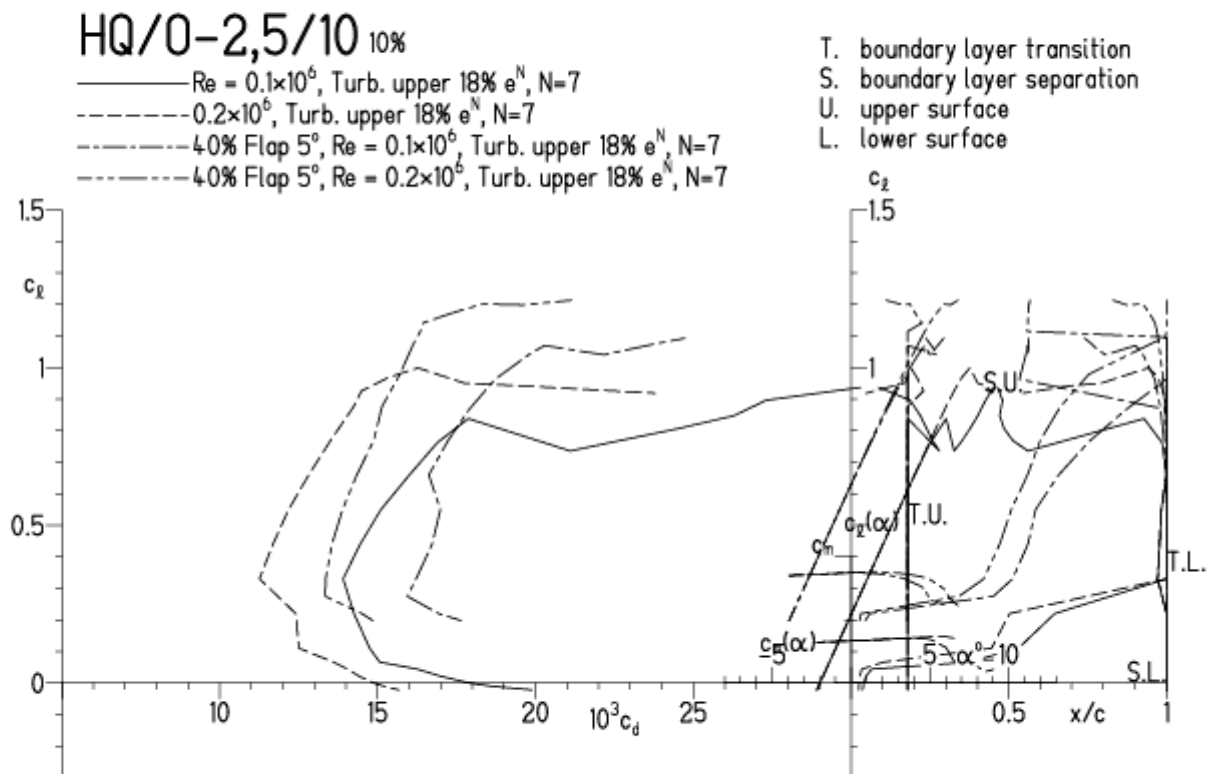


HQ/OLDY-2,5/10, $N=7$, mit 5° Wölbklappenausschlag, niedrige Re-Zahlen, $l_k = 0,4 \cdot l$,
Turbulatoreffekt (optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

EPPLER 2005 V. 8.5.07 RUN 1.5.12 10:57

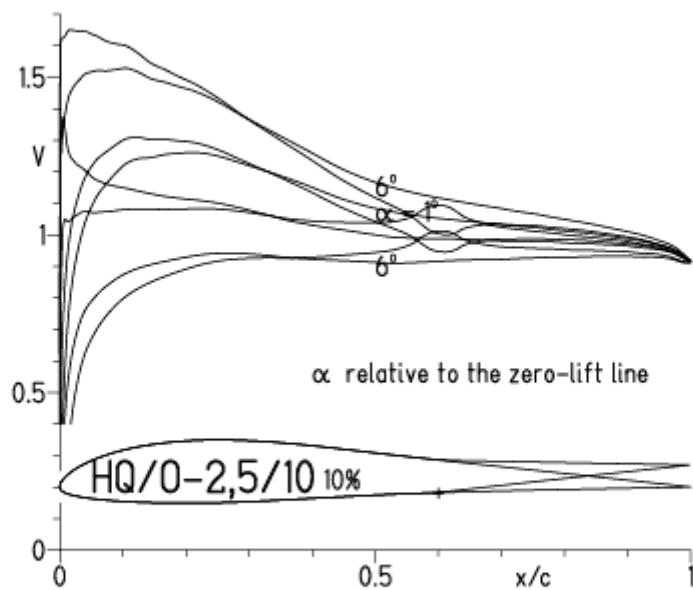


EPPLER 2005 V. 8.5.07 RUN 1.5.12 10:57

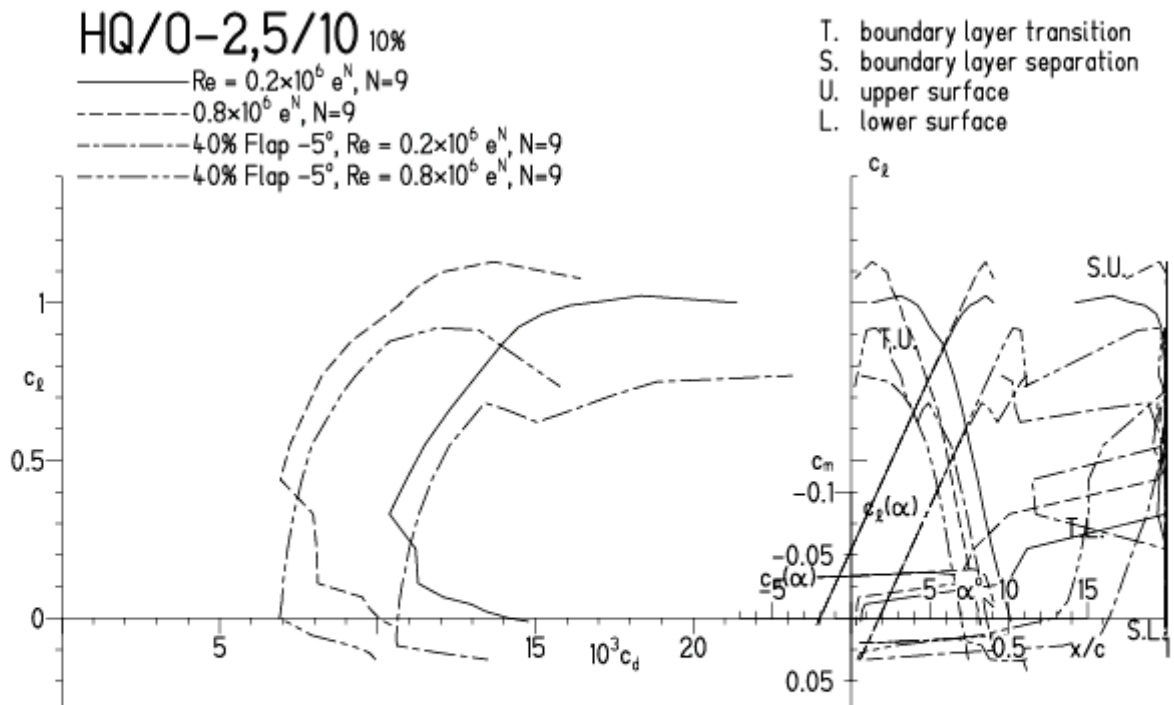


HQ/OLDY-2,5/10, N=9, mit -5° Wölbklappenausschlag, Wölbklappentiefe 40 % von l

EPPLER 2005 V. 8.5.07 RUN 1.5.12 11:22

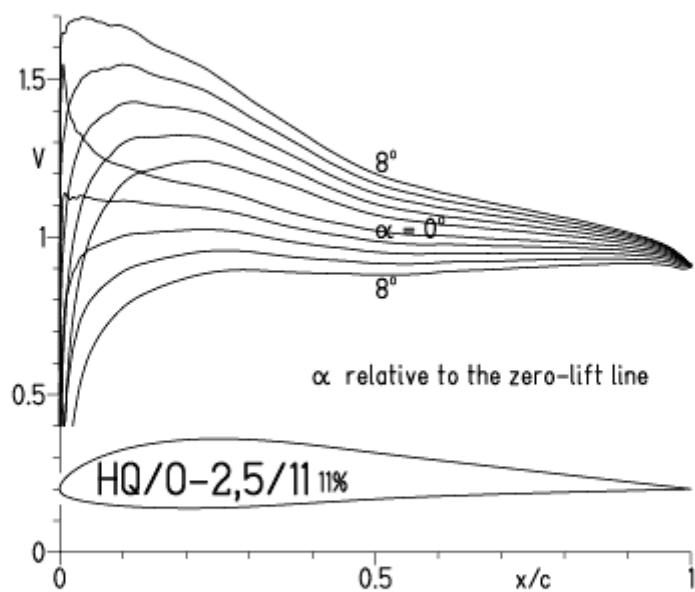


EPPLER 2005 V. 8.5.07 RUN 1.5.12 11:

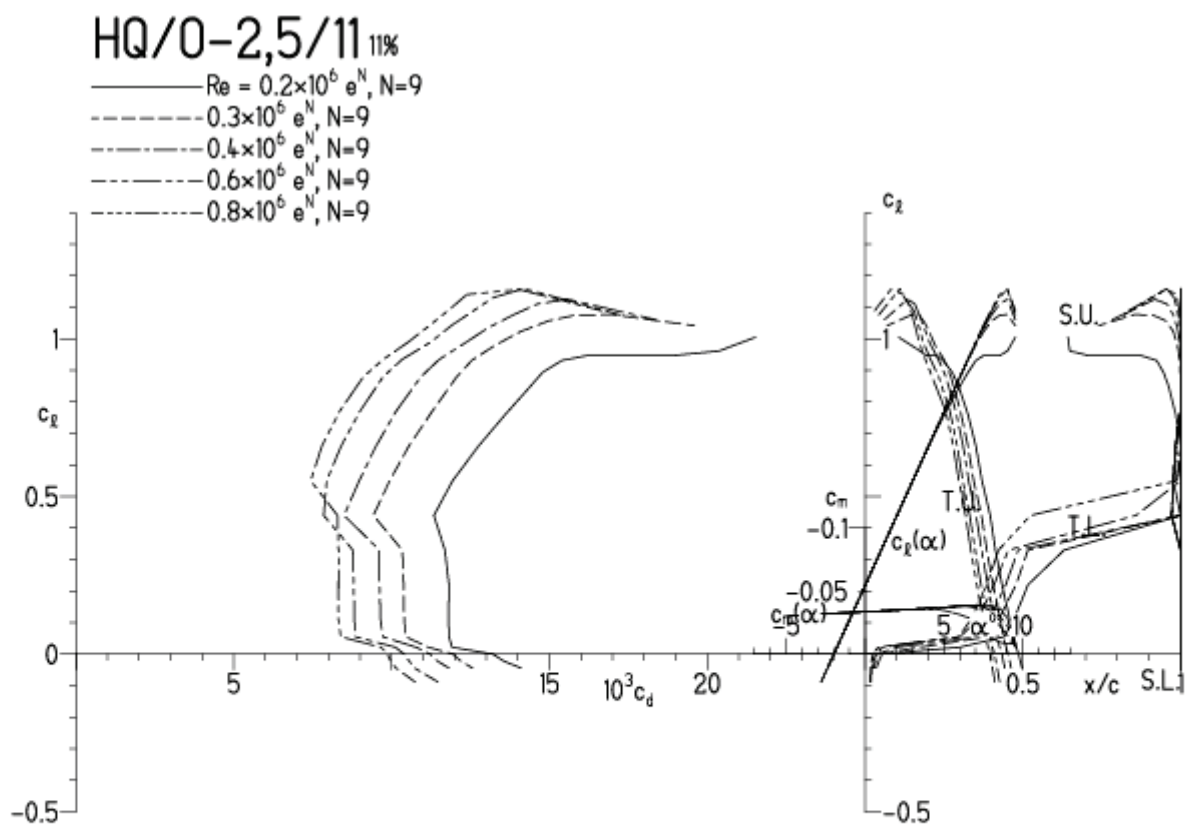


HQ/OLDY-2,5/11, N=9

EPPLER 2005 V. 8.5.07 RUN 6.6.12 18:40

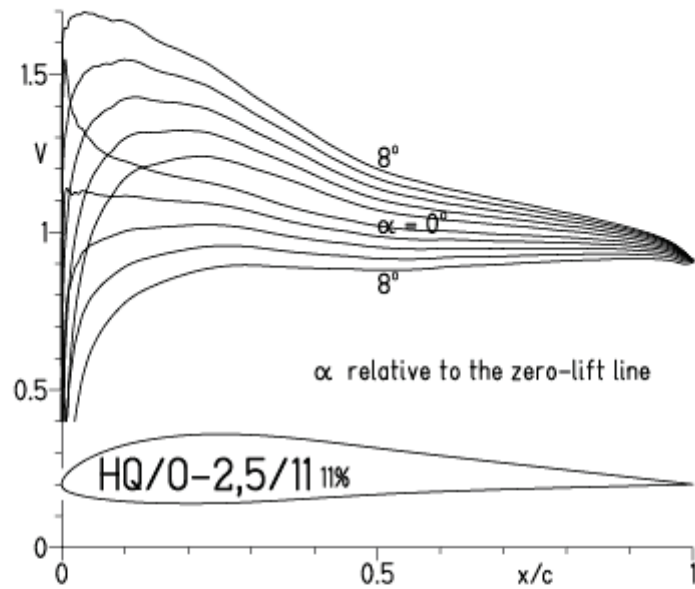


EPPLER 2005 V. 8.5.07 RUN 6.6.12 18:40



HQ/OLDY-2,5/11, $N=9$, Turbulatoreffekt bei niedrigen Re-Zahlen
(optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

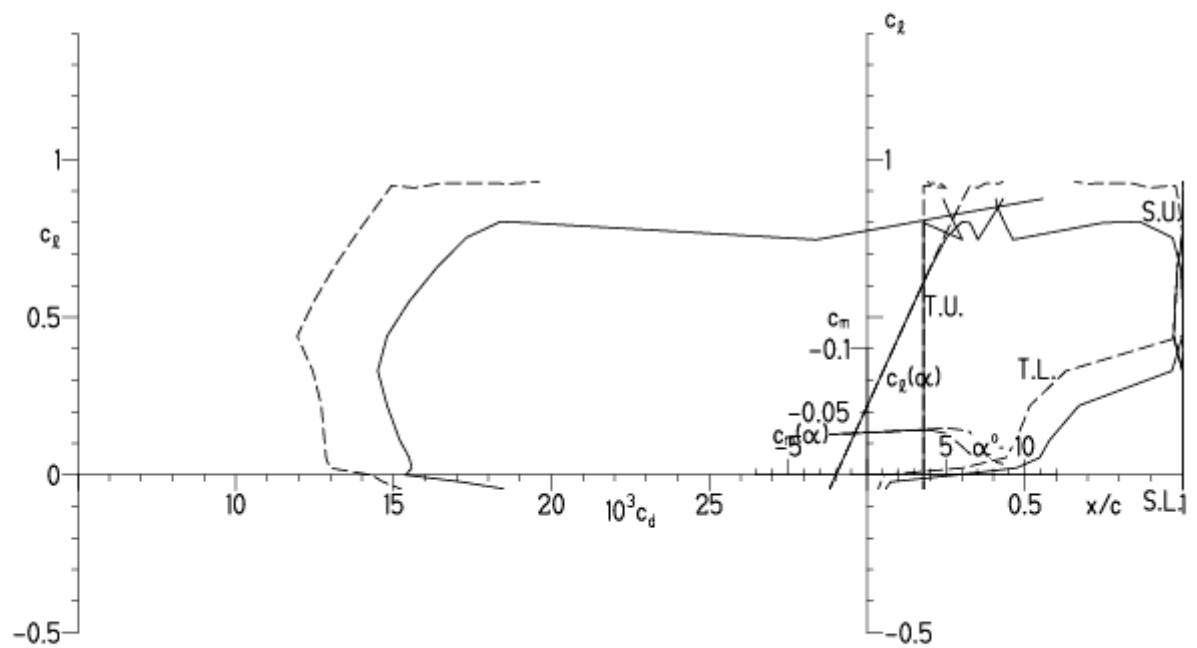
EPPLER 2005 V. 8.5.07 RUN 2.5.12 16:37



EPPLER 2005 V. 8.5.07 RUN

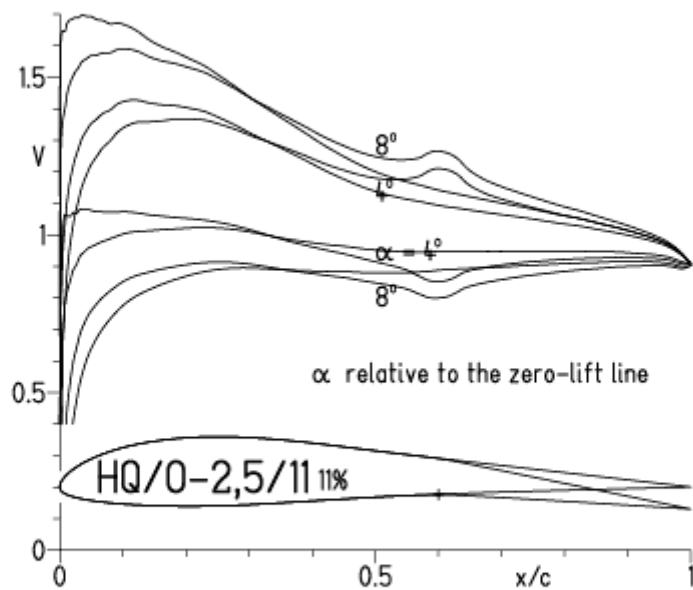
HQ/0-2,5/11 11%

— $Re = 0.1 \times 10^6$, Turb. upper 18% e^N , $N=9$
 - - - 0.2×10^6 , Turb. upper 18% e^N , $N=9$

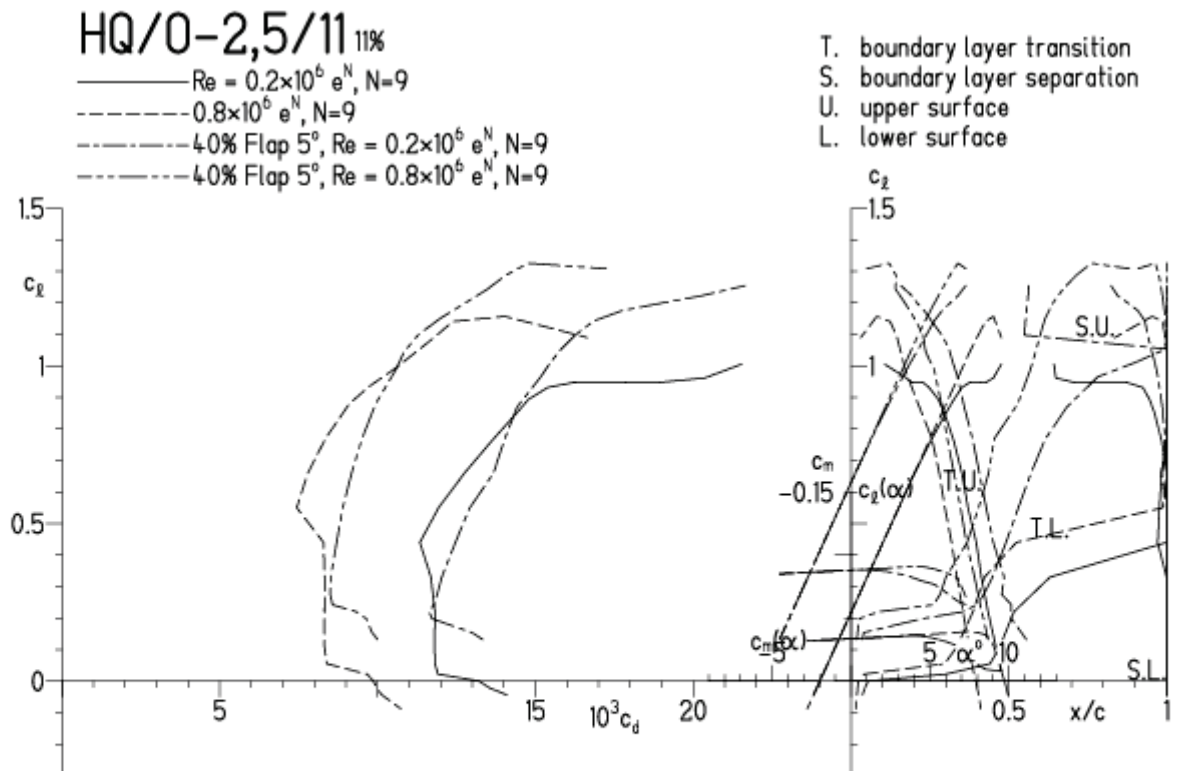


HQ/OLDY-2,5/11, $N=9$, mit 5° Wölbklappenausschlag, Wölbklappentiefe 40 % von l

EPPLER 2005 V. 8.5.07 RUN 2.5.12 16:55

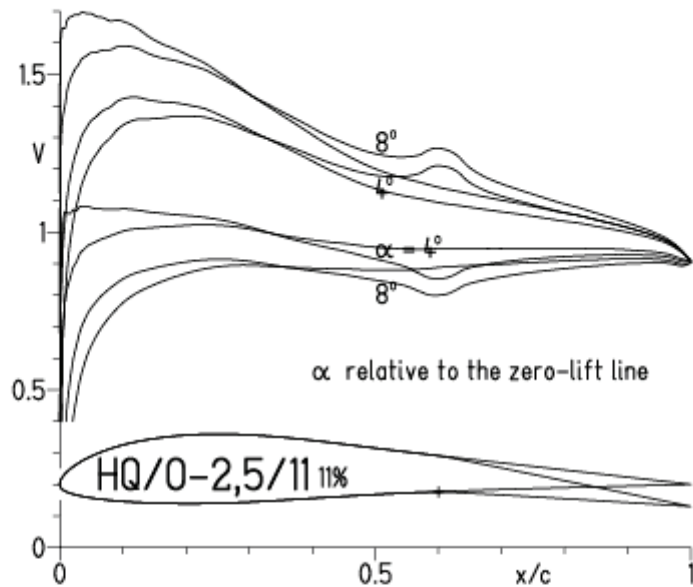


EPPLER 2005 V. 8.5.07 RUN 2.5.12 16:

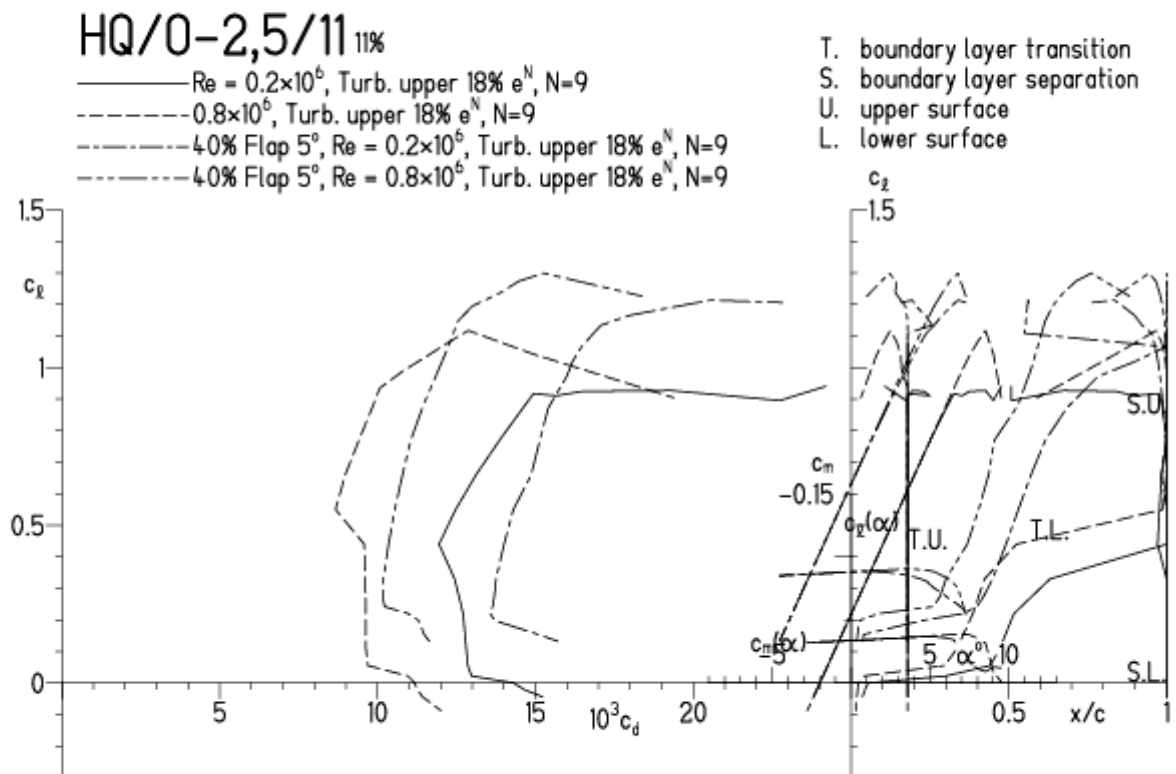


HQ/OLDY-2,5/11, $N=9$, mit 5° Wölbklappenausschlag, $l_k = 0,4 \cdot l$, Turbulatoreffekt
(optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

EPPLER 2005 V. 8.5.07 RUN 2.5.12 17:08

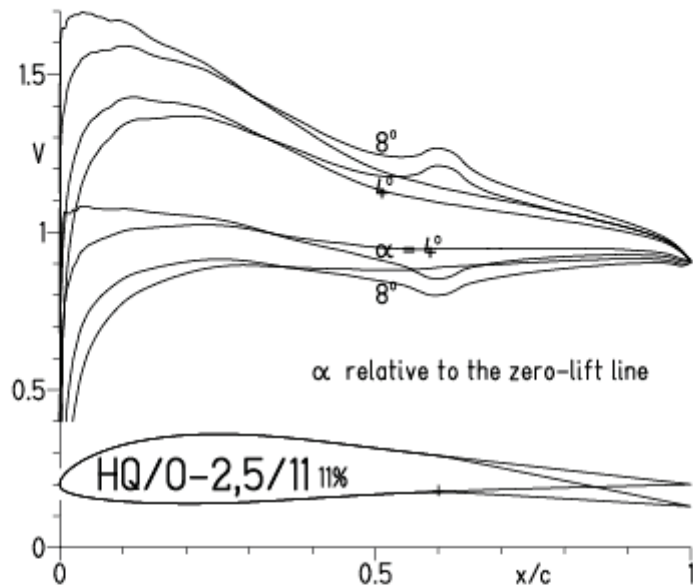


EPPLER 2005 V. 8.5.07 RUN 2.5.12 17:



HQ/OLDY-2,5/11, N=7, mit 5° Wölbklappenausschlag, niedrige Re-Zahlen, $l_k = 0,4 \cdot l$,
Turbulatoreffekt (optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

EPPLER 2005 V. 8.5.07 RUN 2.5.12 17:26

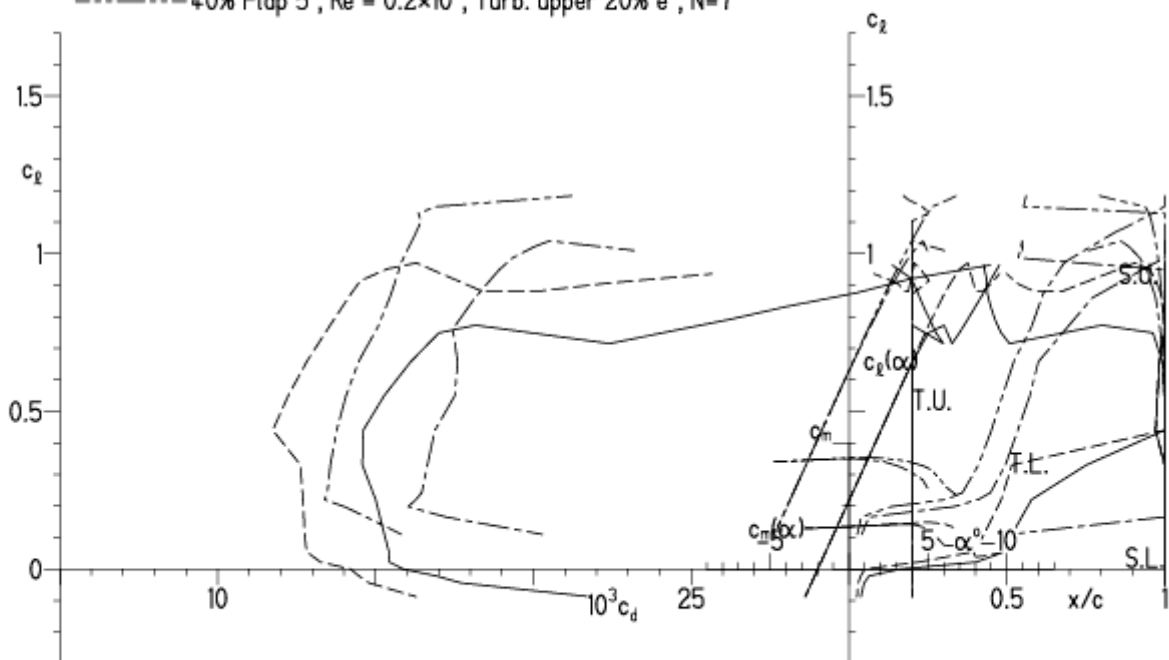


EPPLER 2005 V. 8.5.07 RUN 2.5.12 17:26

HQ/0-2,5/11 11%

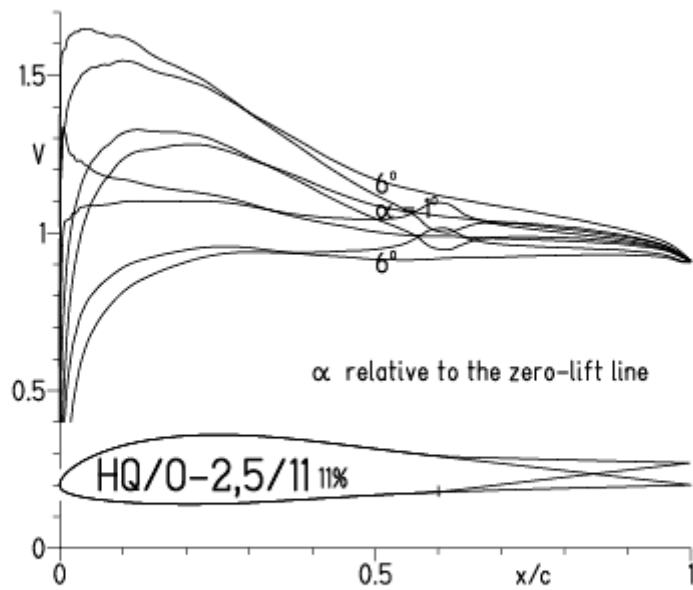
- $Re = 0.1 \times 10^6$, Turb. upper 20% e^N , N=7
- - - 0.2×10^6 , Turb. upper 20% e^N , N=7
- · - 40% Flap 5° , $Re = 0.1 \times 10^6$, Turb. upper 20% e^N , N=7
- · - 40% Flap 5° , $Re = 0.2 \times 10^6$, Turb. upper 20% e^N , N=7

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

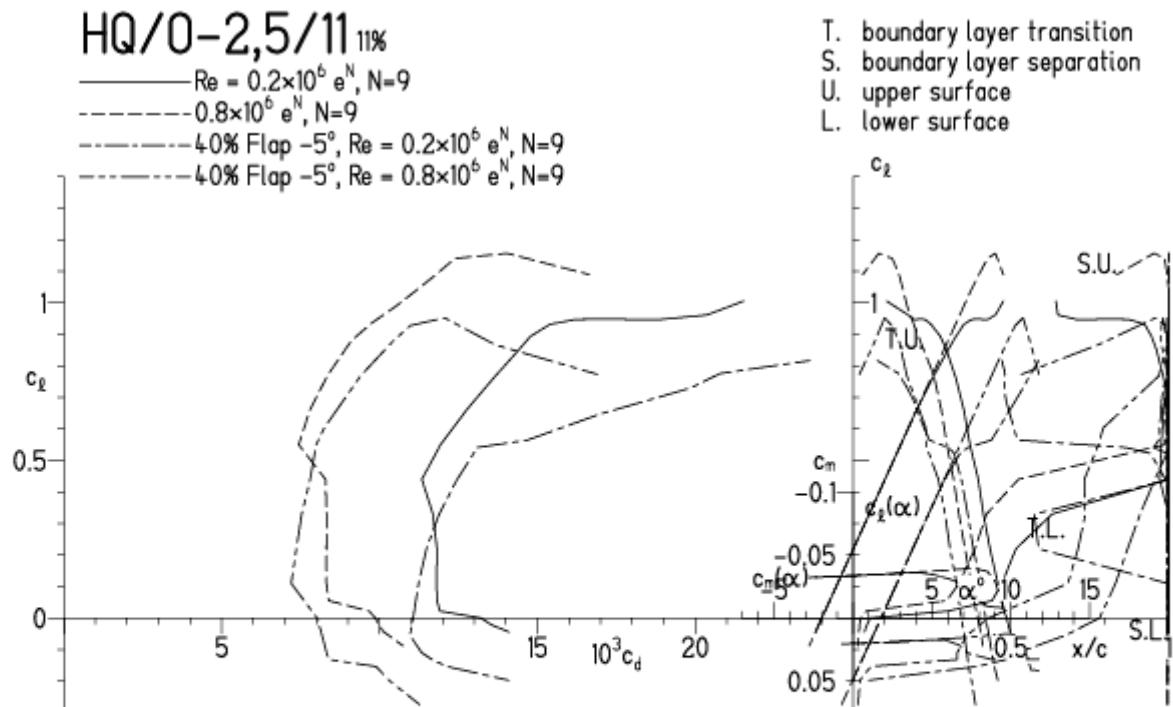


HQ/OLDY-2,5/11, $N=9$, mit -5° Wölbklappenausschlag, Wölbklappentiefe 40 % von l

EPPLER 2005 V. 8.5.07 RUN 2.5.12 17:41

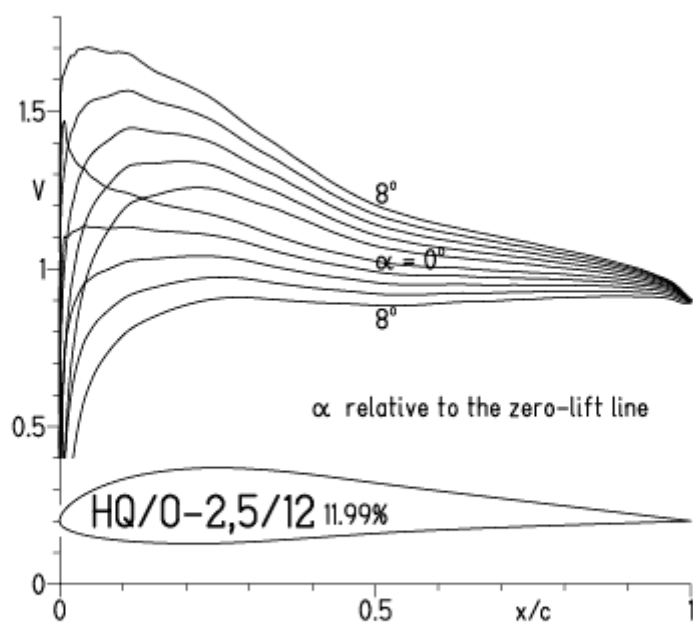


EPPLER 2005 V. 8.5.07 RUN 2.5.12 17:41

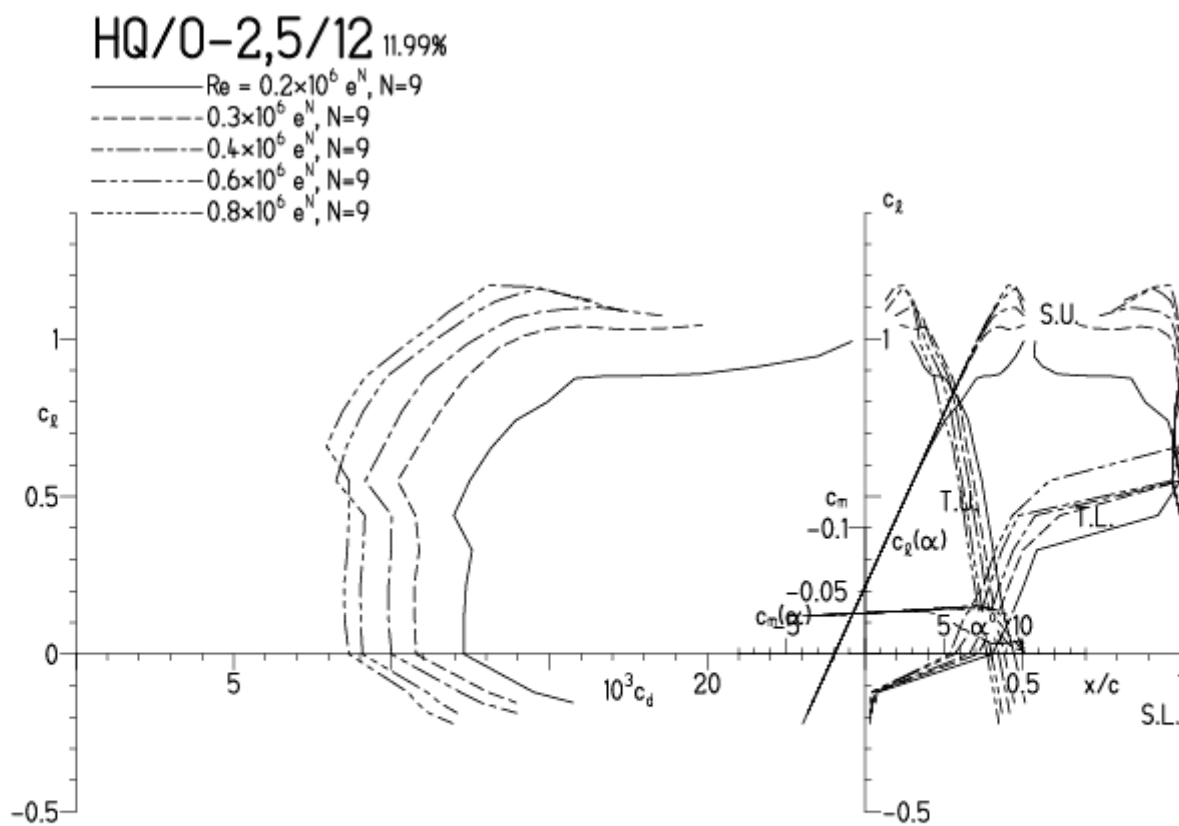


HQ/OLDY-2,5/12, N=9

EPPLER 2005 V. 8.5.07 RUN 6.6.12 18:36

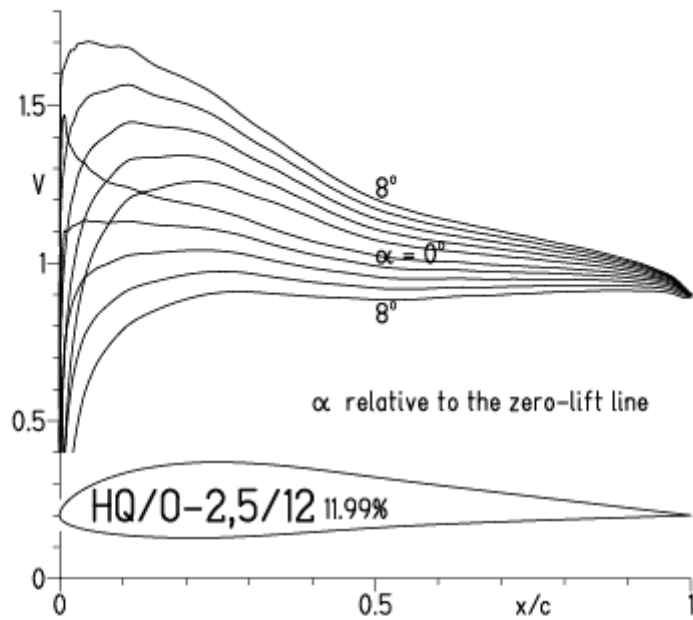


EPPLER 2005 V. 8.5.07 RUN 6.6.12 18:36



HQ/OLDY-2,5/12, $N=9$, Turbulatoreffekt bei niedrigen Re-Zahlen
(optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

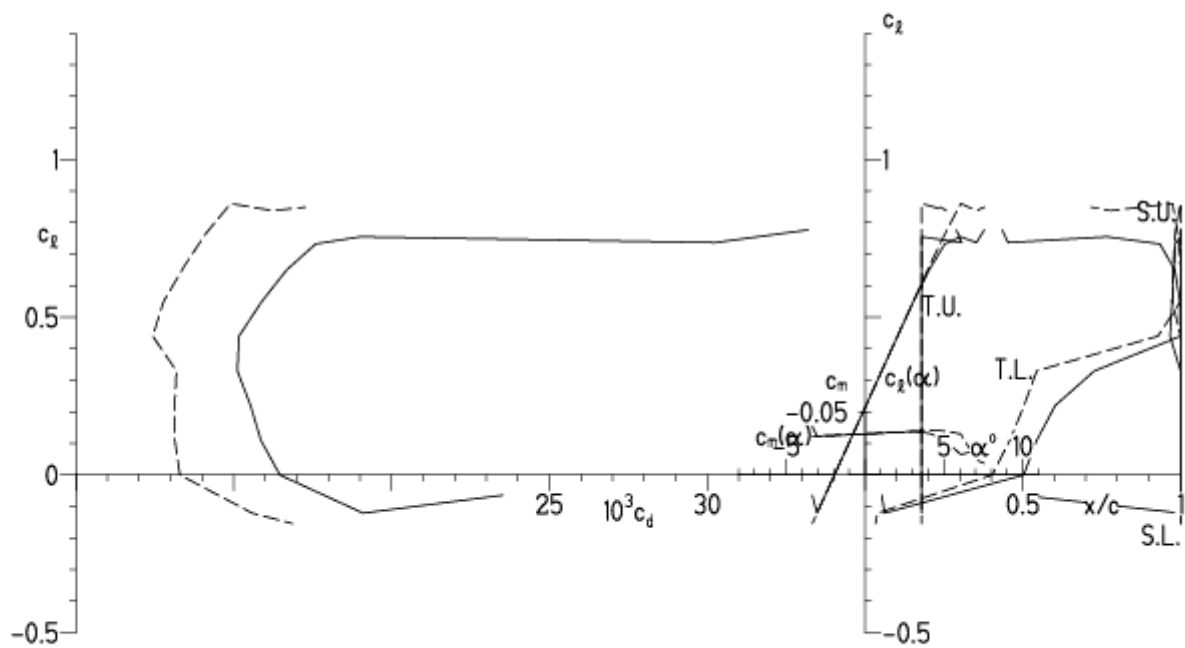
EPPLER 2005 V. 8.5.07 RUN 3.5.12 11:58



EPPLER 2005 V. 8.5.07 RUN 3.5.12 11:58

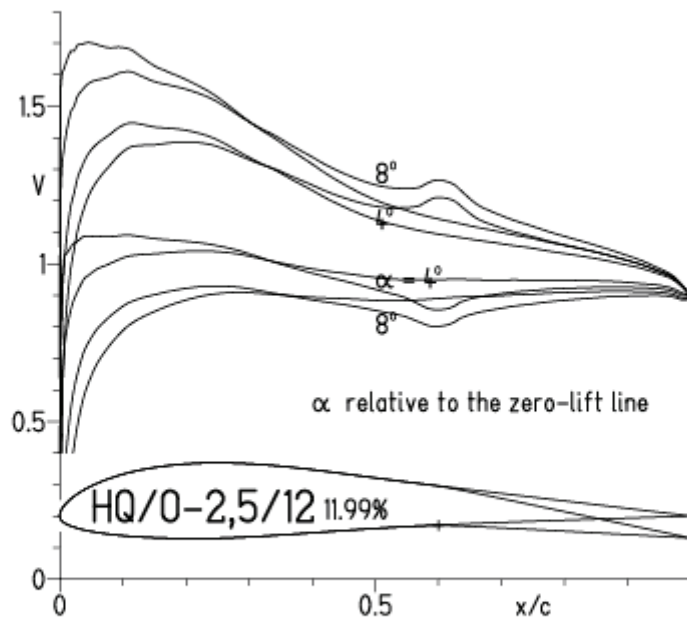
HQ/0-2,5/12 11.99%

— $Re = 0.1 \times 10^6$, Turb. upper 18% e^N , $N=9$
 - - - 0.2×10^6 , Turb. upper 18% e^N , $N=9$

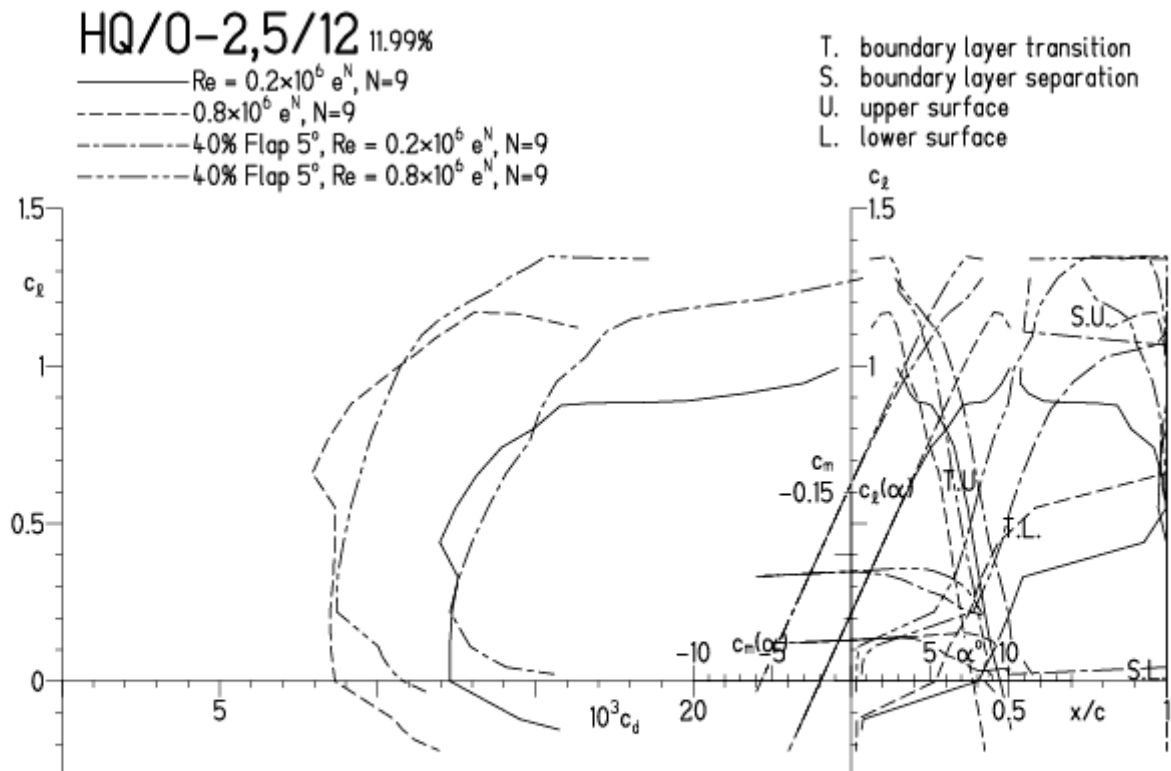


HQ/OLDY-2,5/12, $N=9$, mit 5° Wölbklappenausschlag, Wölbklappentiefe 40 % von l

EPPLER 2005 V. 8.5.07 RUN 3.5.12 12:13

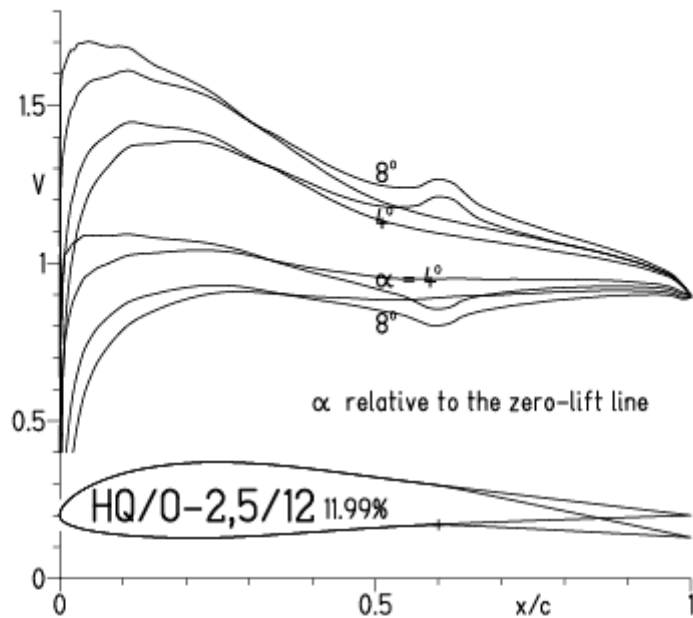


EPPLER 2005 V. 8.5.07 RUN 3.5.12 12:13

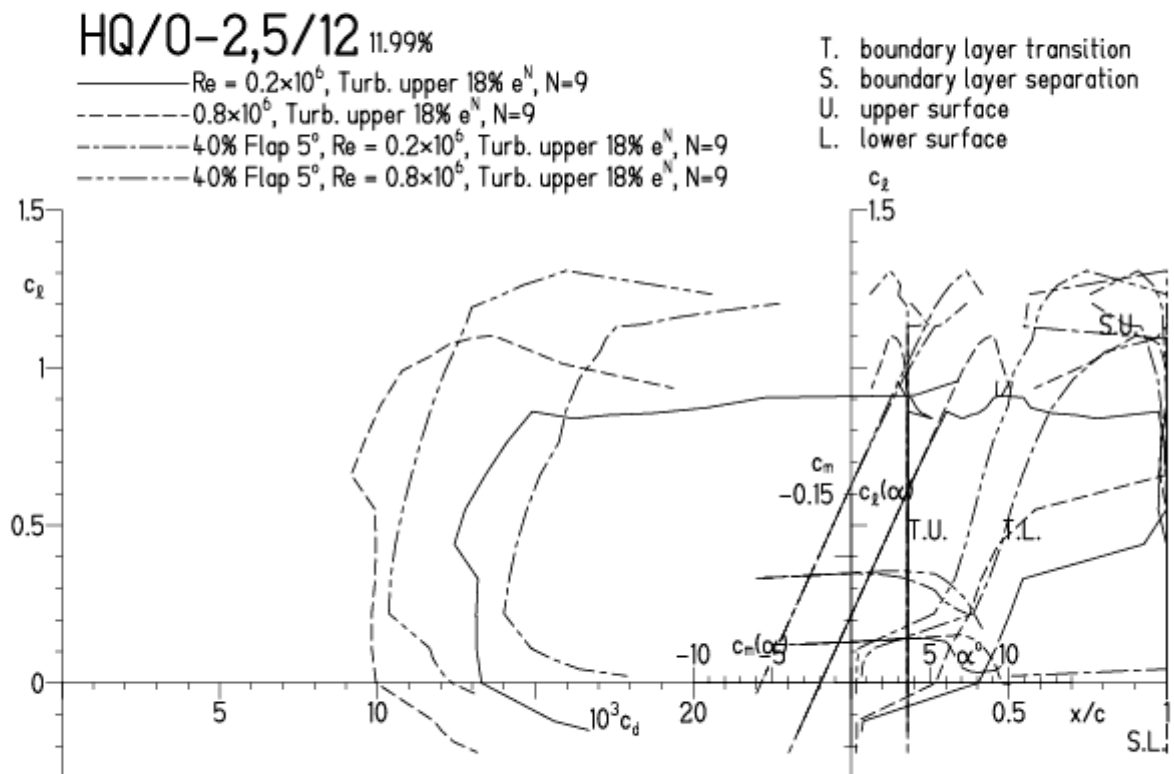


HQ/OLDY-2,5/12, $N=9$, mit 5° Wölbklappenausschlag, $l_k = 0,4 \cdot l$, Turbulatoreffekt
(optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

EPPLER 2005 V. 8.5.07 RUN 3.5.12 13:05

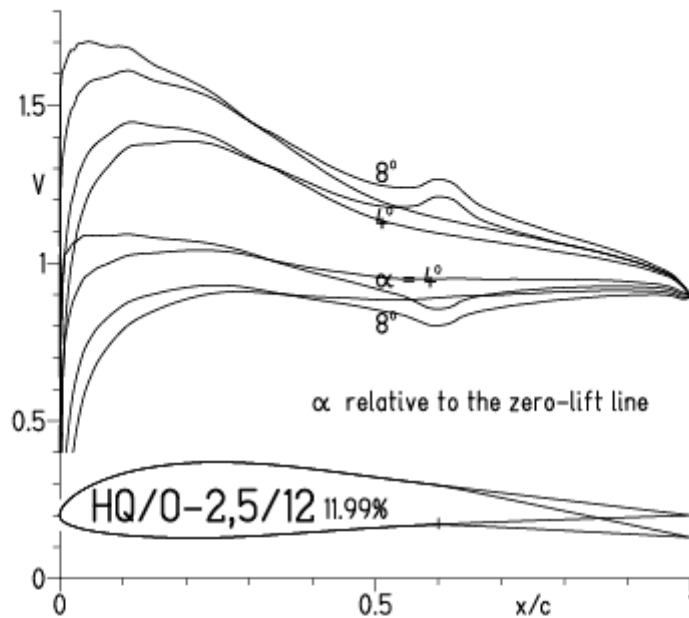


EPPLER 2005 V. 8.5.07 RUN 3.5.12 13:05



HQ/OLDY-2,5/12, $N=7$, mit 5° Wölbklappenausschlag, niedrige Re-Zahlen, $l_k = 0,4 \cdot l$,
Turbulatoreffekt (optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

EPPLER 2005 V. 8.5.07 RUN 3.5.12 12:54

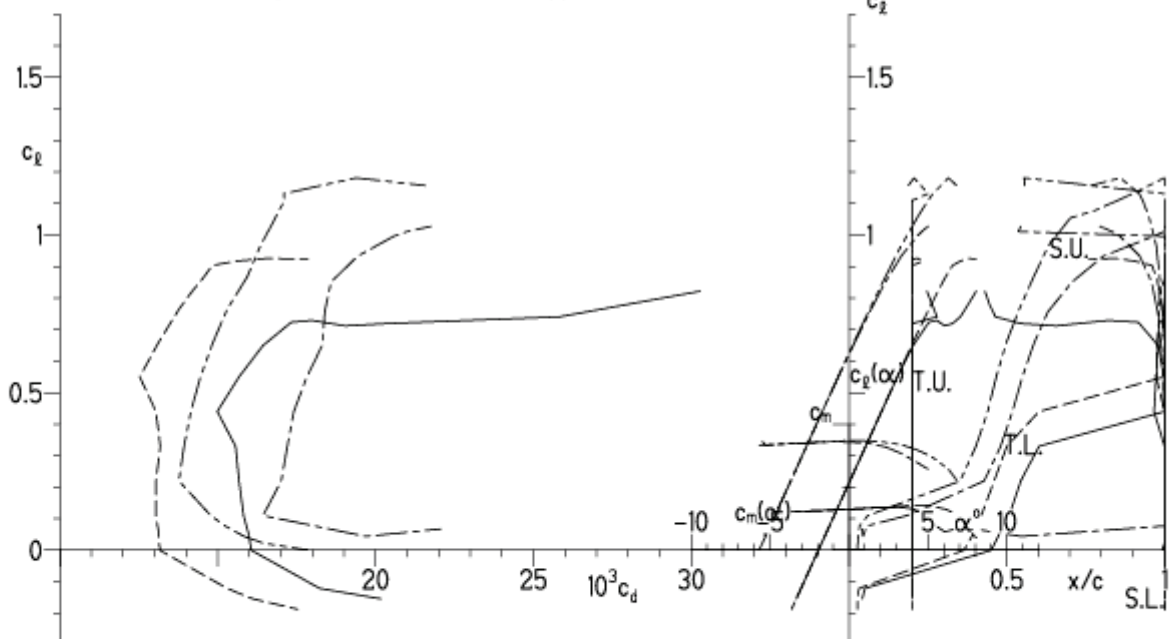


EPPLER 2005 V. 8.5.07 RUN 3.5.12 12:54

HQ/0-2,5/12 11.99%

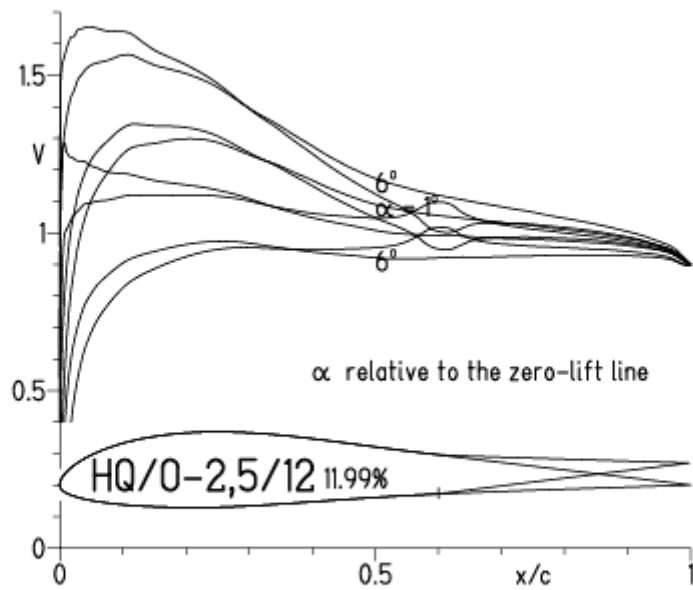
- $Re = 0.1 \times 10^6$, Turb. upper 20% e^N , $N=7$
- - - 0.2×10^6 , Turb. upper 20% e^N , $N=7$
- · - 40% Flap 5° , $Re = 0.1 \times 10^6$, Turb. upper 20% e^N , $N=7$
- · - 40% Flap 5° , $Re = 0.2 \times 10^6$, Turb. upper 20% e^N , $N=7$

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

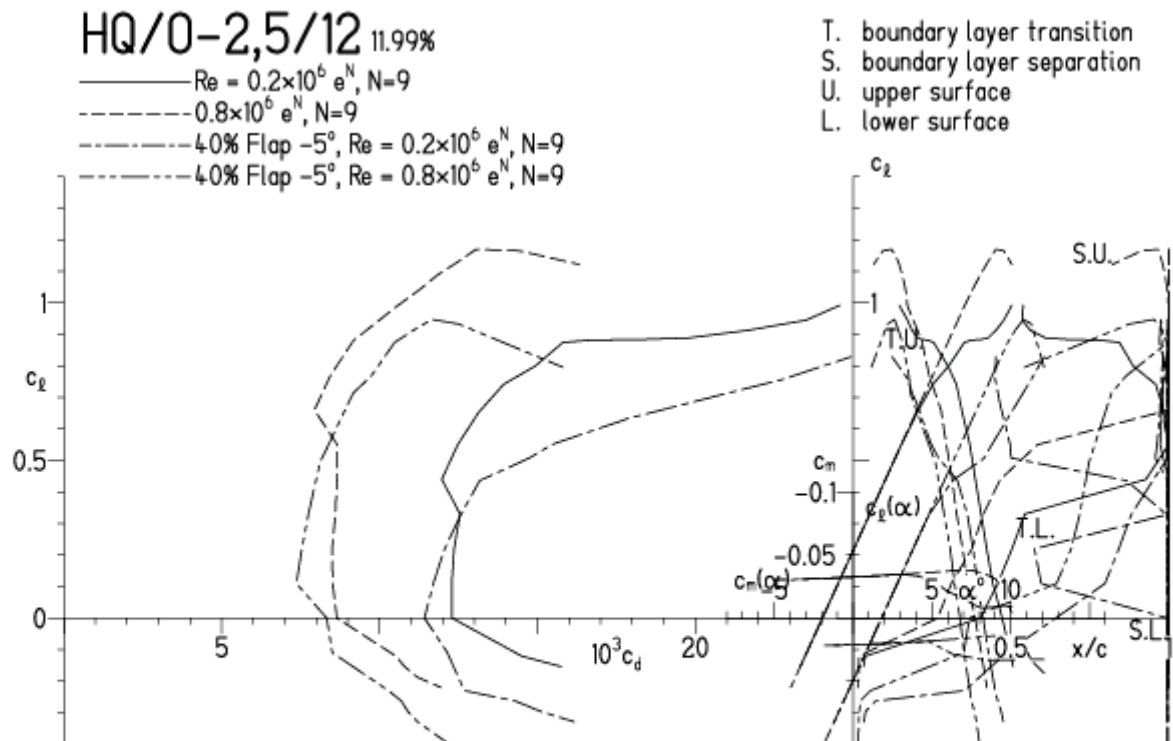


HQ/OLDY-2,5/12, N=9, mit -5° Wölbklappenausschlag, Wölbklappentiefe 40 % von l

EPPLER 2005 V. 8.5.07 RUN 3.5.12 13:24

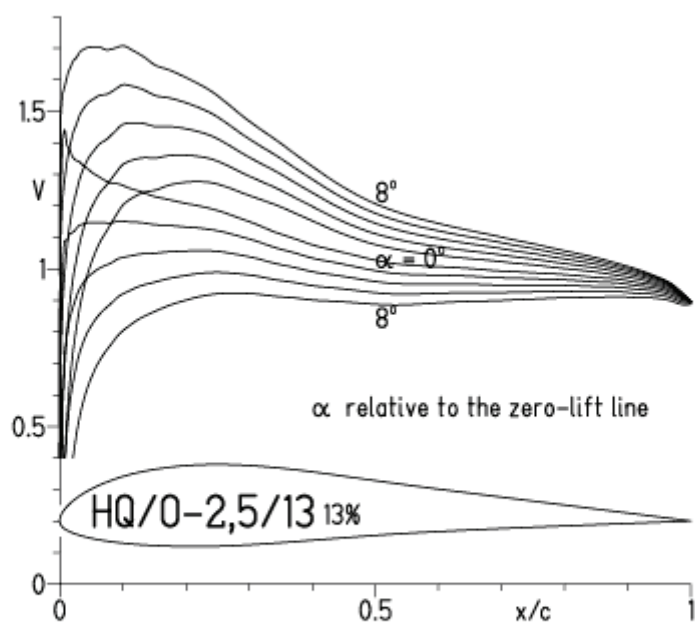


EPPLER 2005 V. 8.5.07 RUN 3.5.12 13:24

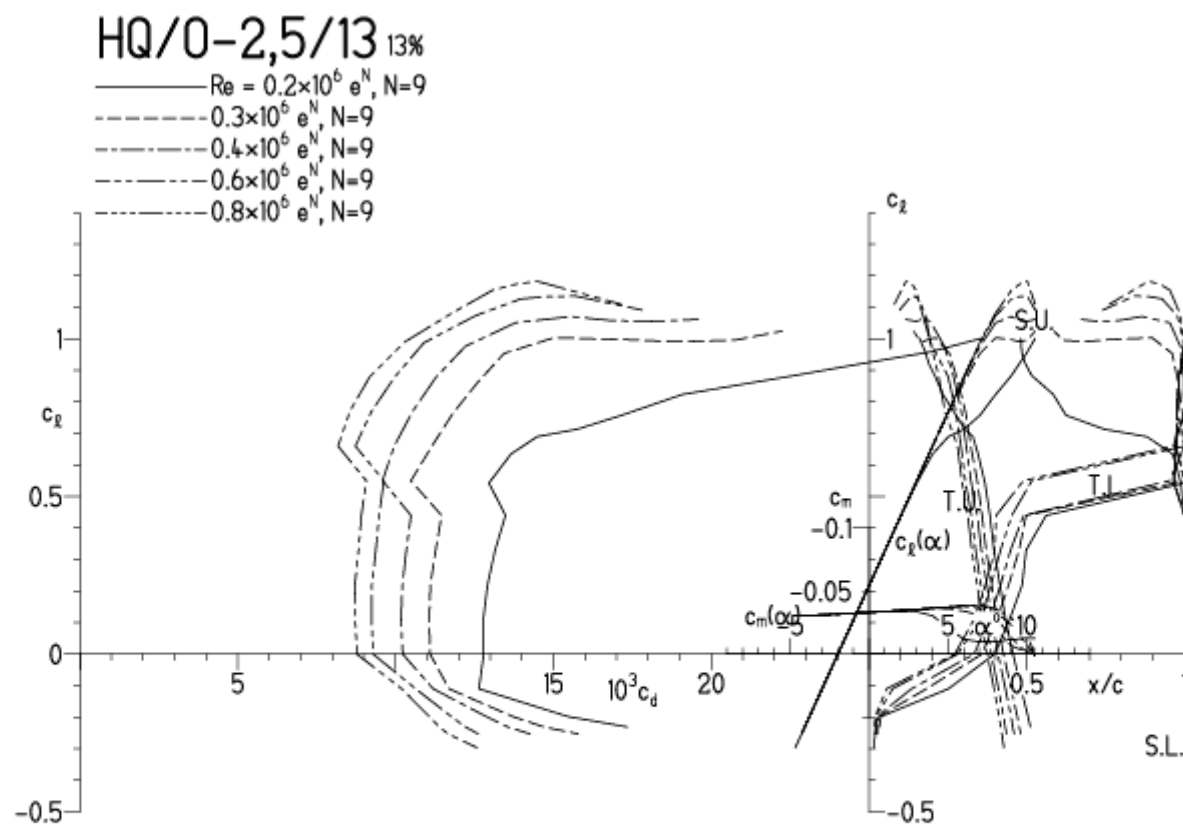


HQ/OLDY-2,5/13, N=9

EPPLER 2005 V. 8.5.07 RUN 6.6.12 18:30

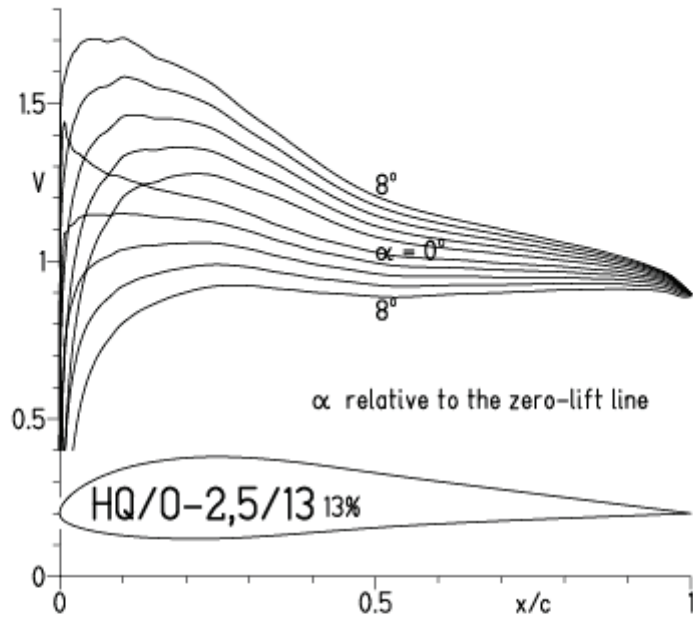


EPPLER 2005 V. 8.5.07 RUN 6.6.12 18:30



HQ/OLDY-2,5/13, $N=9$, Turbulatoreffekt bei niedrigen Re-Zahlen
(optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

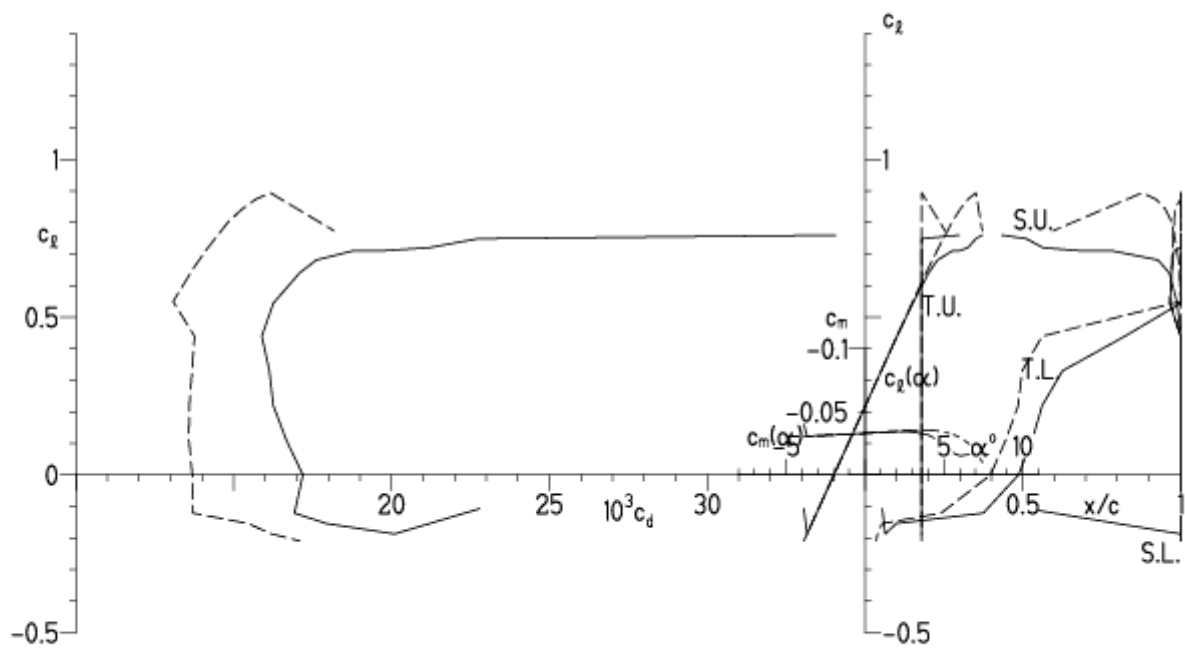
EPPLER 2005 V. 8.5.07 RUN 14.5.12 18:27



EPPLER 2005 V. 8.5.07 RUN 14.5.12 18:27

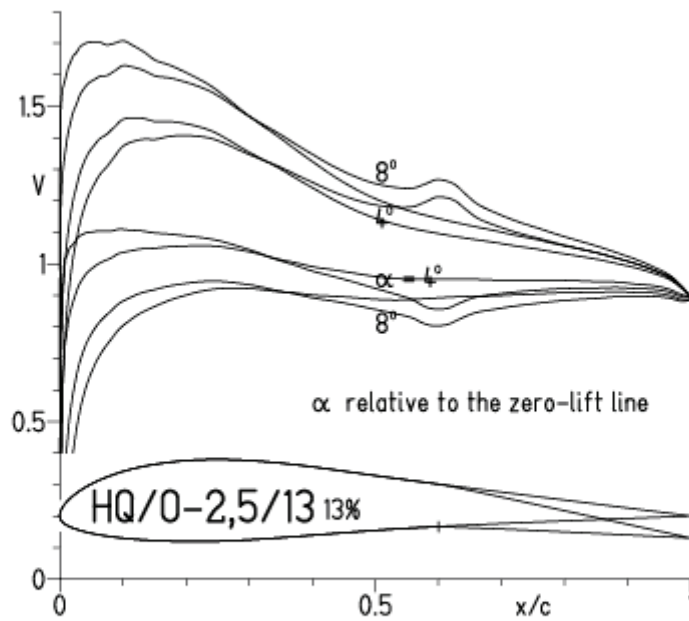
HQ/0-2,5/13 13%

— $Re = 0.1 \times 10^6$, Turb. upper 18% e^N , $N=9$
 - - - 0.2×10^6 , Turb. upper 18% e^N , $N=9$

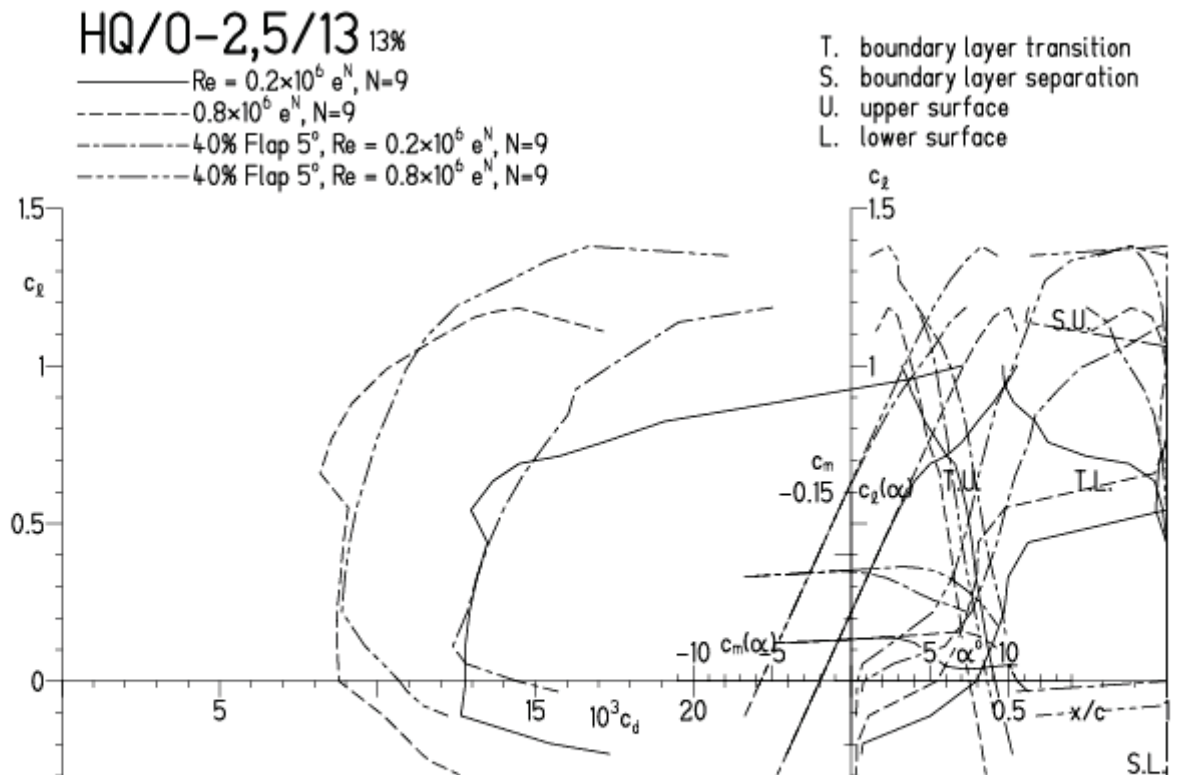


HQ/OLDY-2,5/13, $N=9$, mit 5° Wölbklappenausschlag, Wölbklappentiefe 40 % von l

EPPLER 2005 V. 8.5.07 RUN 14.5.12 18:42

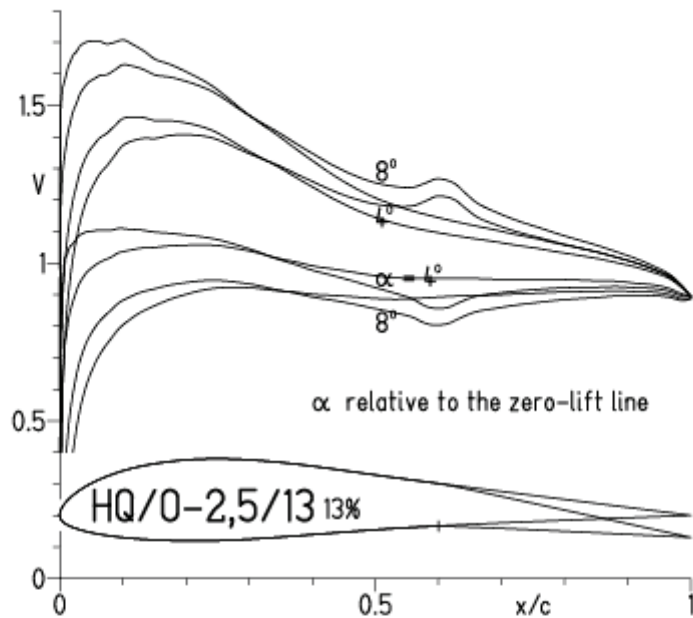


EPPLER 2005 V. 8.5.07 RUN 14.5.12 18:42

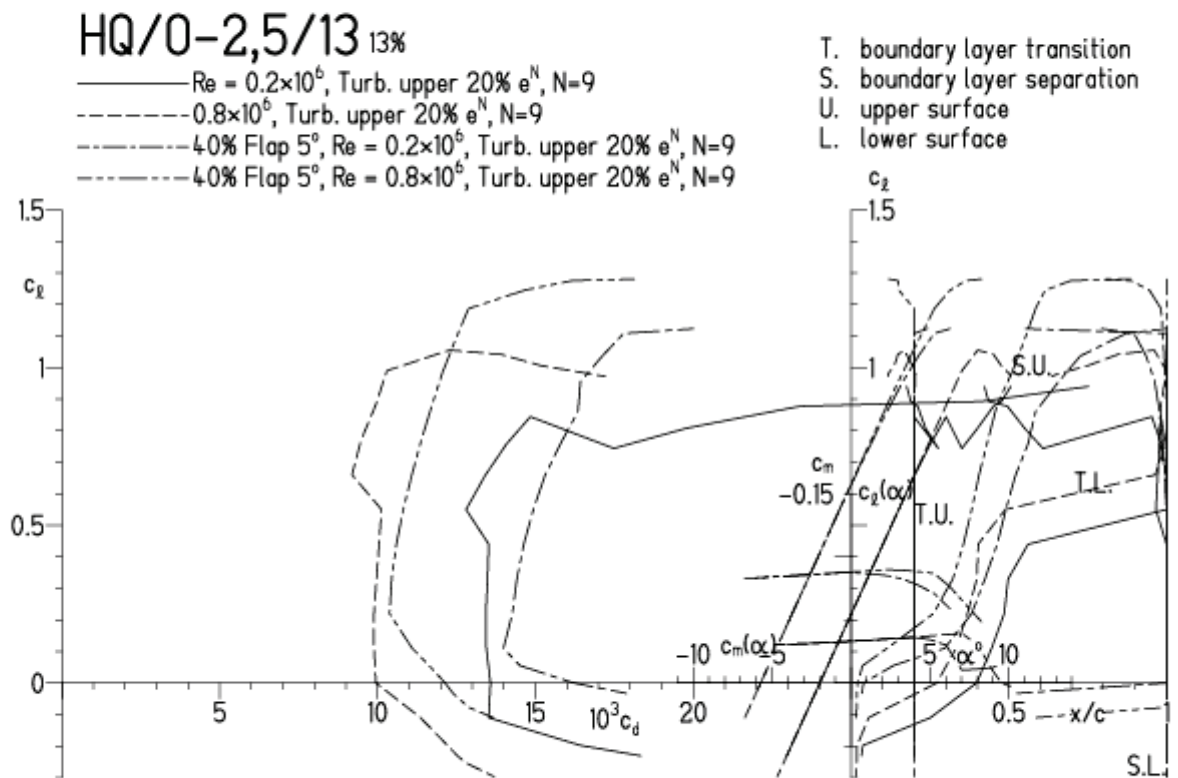


HQ/OLDY-2,5/13, $N=9$, mit 5° Wölbklappenausschlag, $l_k = 0,4 \cdot l$, Turbulatoreffekt
(optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

EPPLER 2005 V. 8.5.07 RUN 15.5.12 17:26

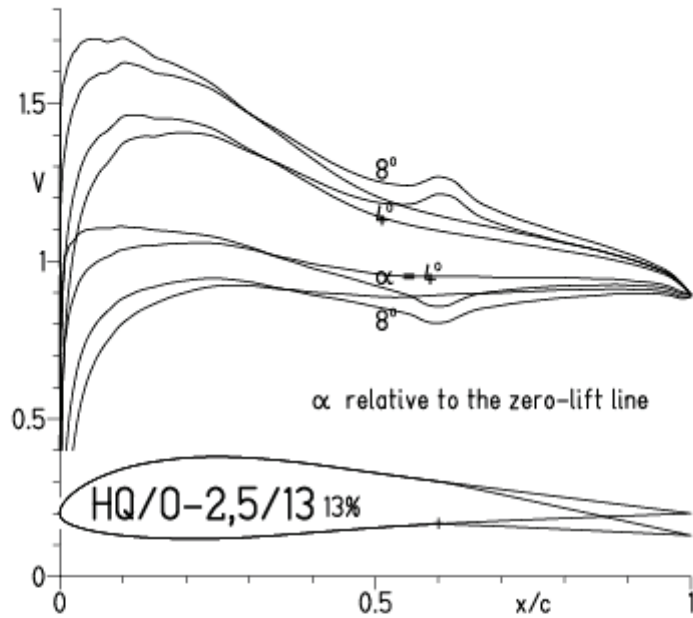


EPPLER 2005 V. 8.5.07 RUN 15.5.12 17:26



HQ/OLDY-2,5/13, $N=7$, mit 5° Wölbklappenausschlag, niedrige Re-Zahlen, $l_k = 0,4 \cdot l$,
Turbulatoreffekt (optimale Turbulatorposition bei 15 – 20 % der Profiltiefe)

EPPLER 2005 V. 8.5.07 RUN 15.5.12 17:09

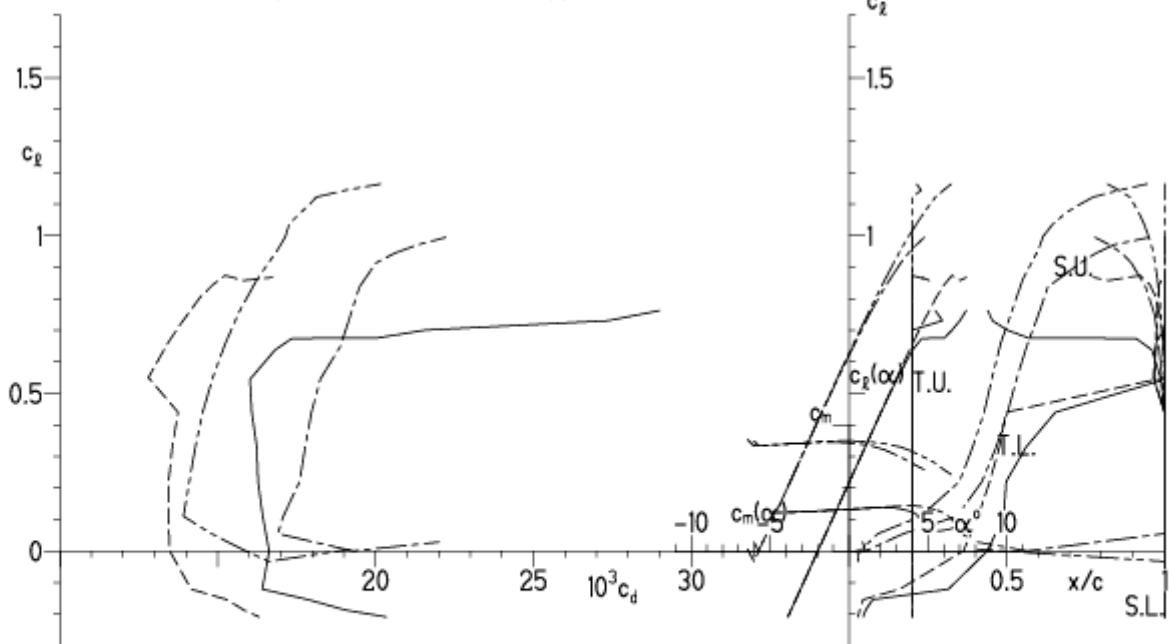


EPPLER 2005 V. 8.5.07 RUN 1

HQ/0-2,5/13 13%

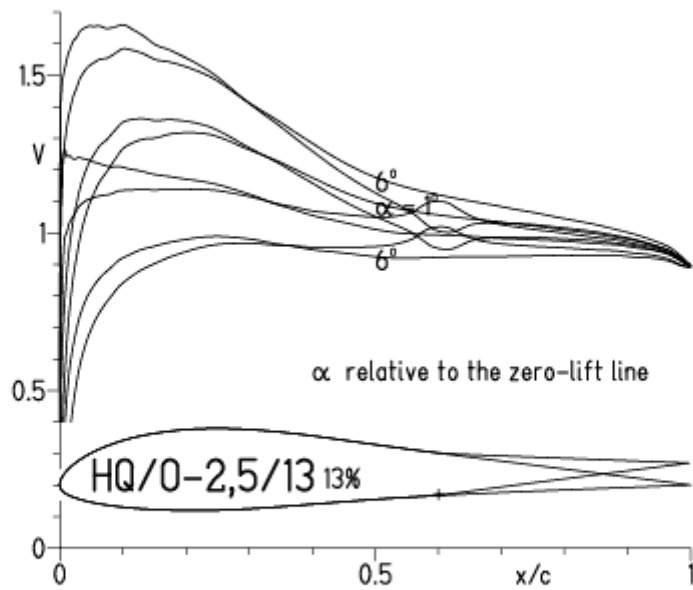
- $Re = 0.1 \times 10^6$, Turb. upper 20% e^N , $N=7$
- - - 0.2×10^6 , Turb. upper 20% e^N , $N=7$
- · - 40% Flap 5° , $Re = 0.1 \times 10^6$, Turb. upper 20% e^N , $N=7$
- · - 40% Flap 5° , $Re = 0.2 \times 10^6$, Turb. upper 20% e^N , $N=7$

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



HQ/OLDY-2,5/13, $N=9$, mit -5° Wöbklappenausschlag, Wöbklappentiefe 40 % von l

EPPLER 2005 V. 8.5.07 RUN 15.5.12 17:42



EPPLER 2005 V

