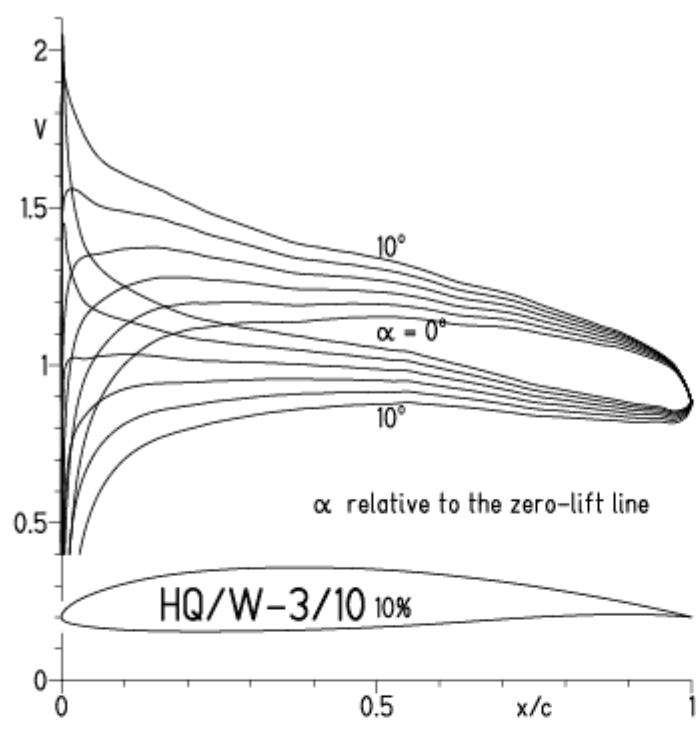
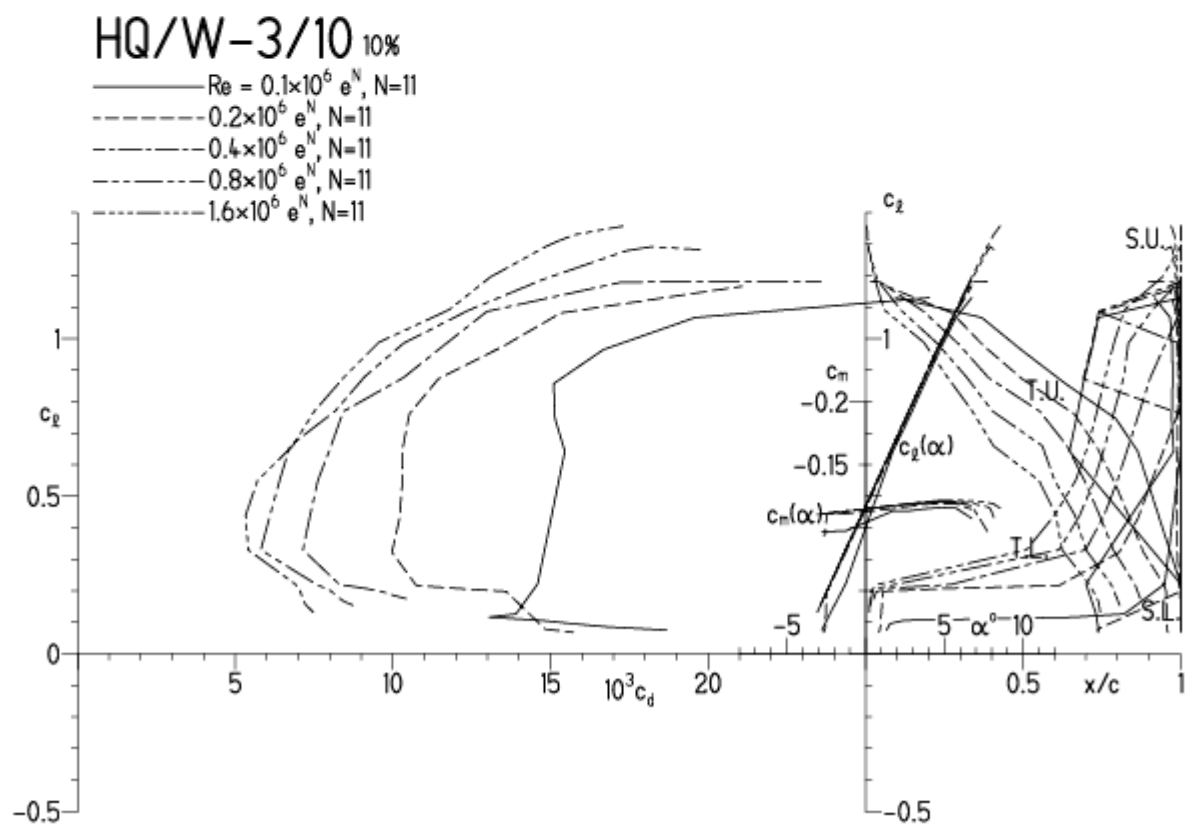


HQ/W-3/10, N=11

EPPLER 2005 V. 8.5.07 RUN 16.12.10 16:42

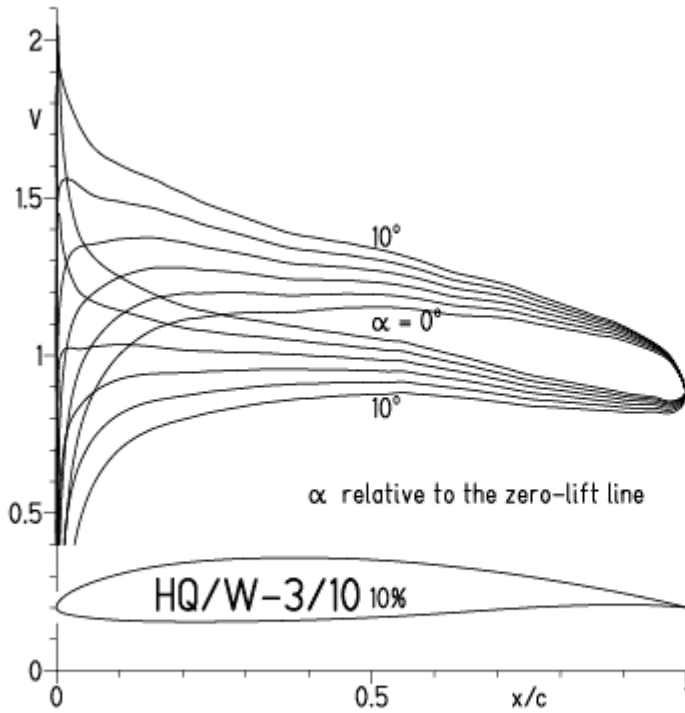


EPPLER 2005 V. 8.5.07 RUN 16.12.10 16:42

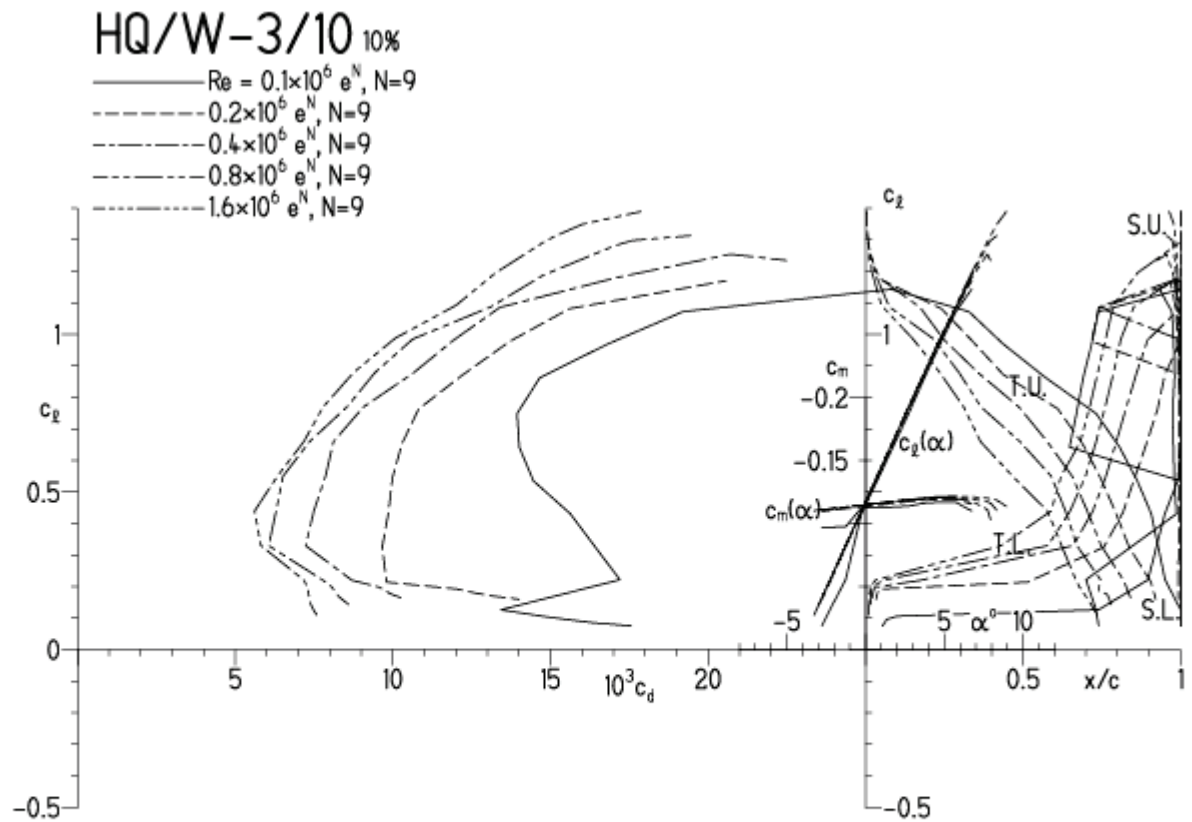


HQ/W-3/10, N=9

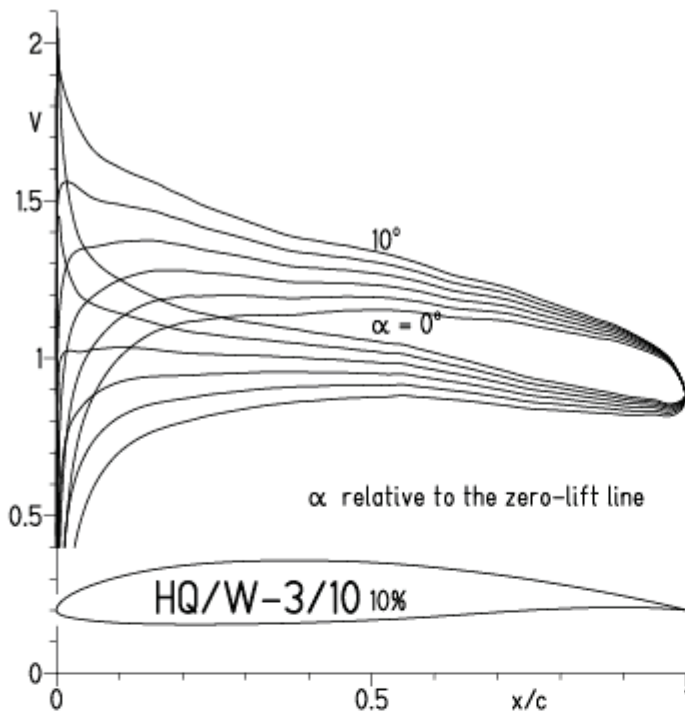
EPPLER 2005 V. 8.5.07 RUN 16.12.10 16:38



EPPLER 2005 V. 8.5.07 RUN 16.12.10 16:38



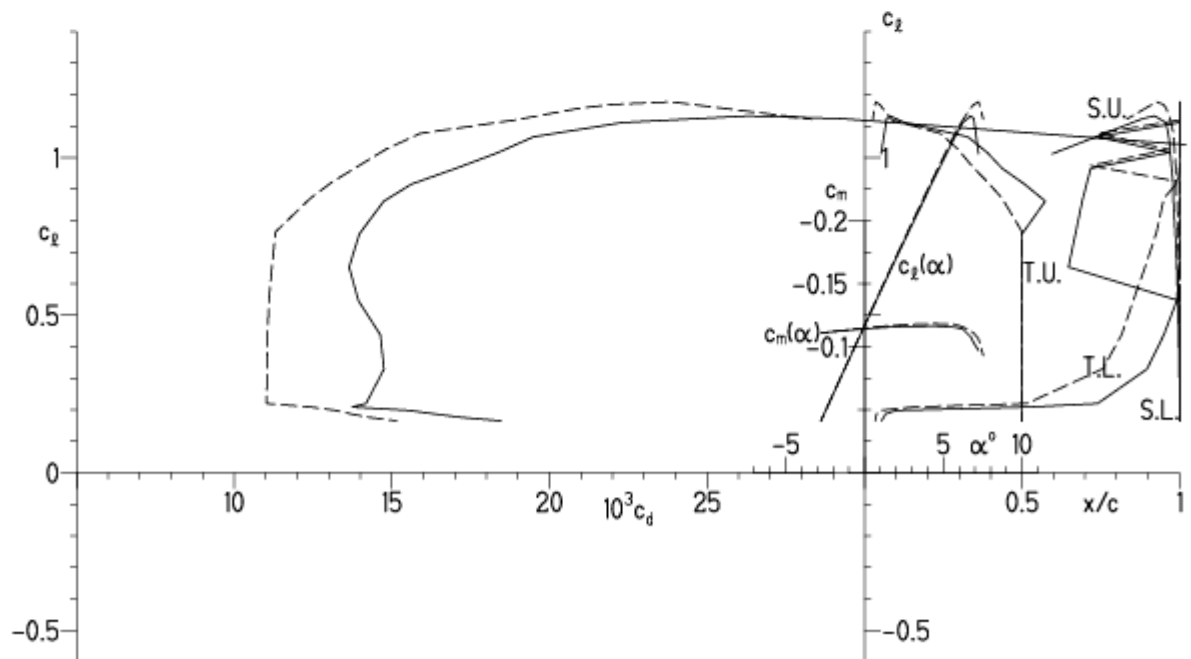
EPPLER 2005 V. 8.5.07 RUN 16.12.10 16:58



EPPLER 2005 V. 8.5.07 RUN 16.12

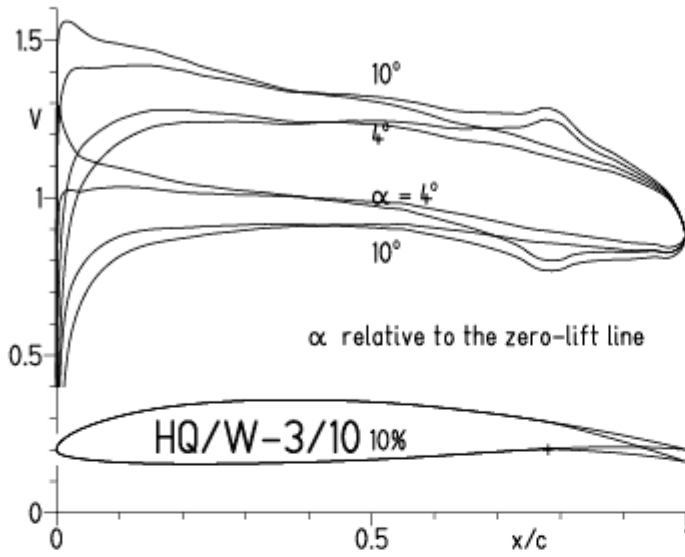
### HQ/W-3/10 10%

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

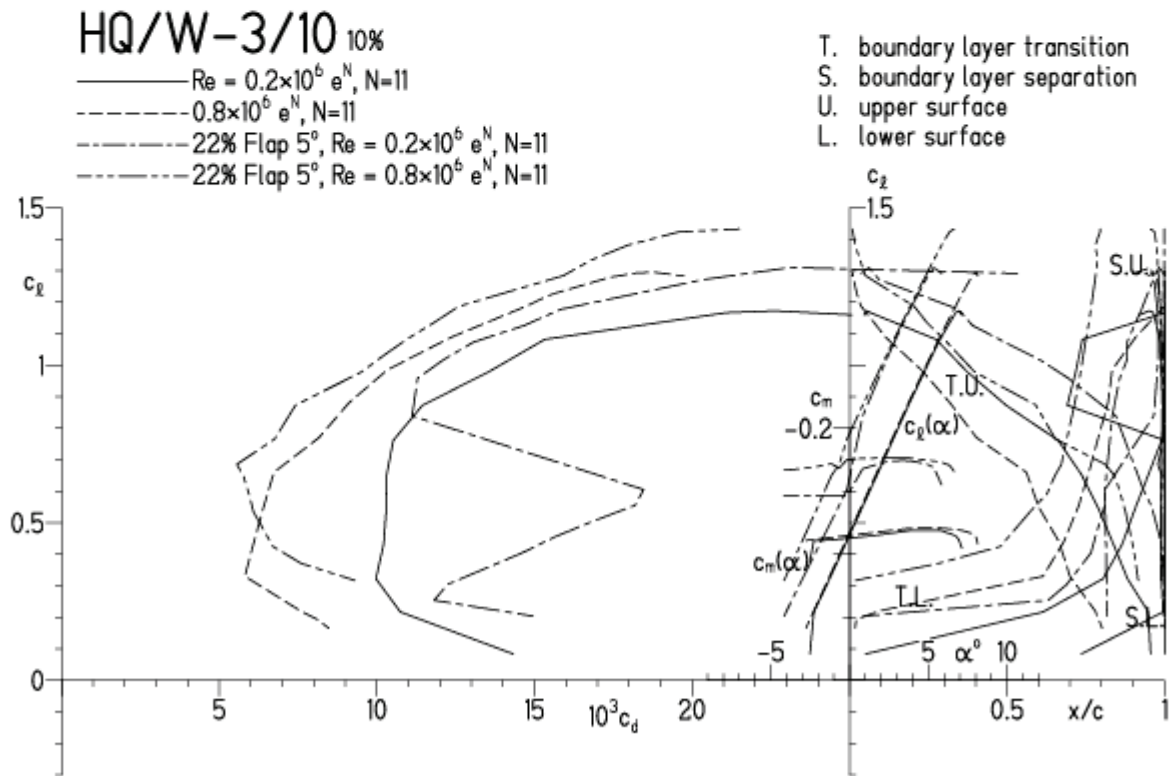


HQ/W-3/10,  $N=11$ , mit  $5^\circ$  Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 16.12.10 17:40

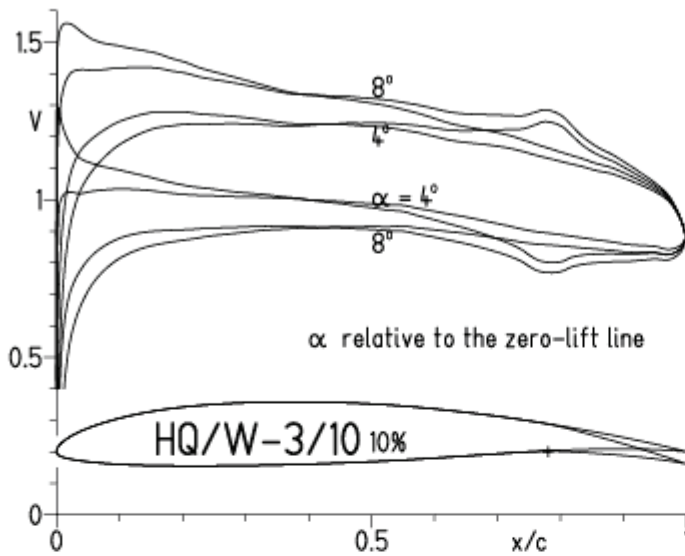


EPPLER 2005 V. 8.5.07 RUN 16.12.10 17:40

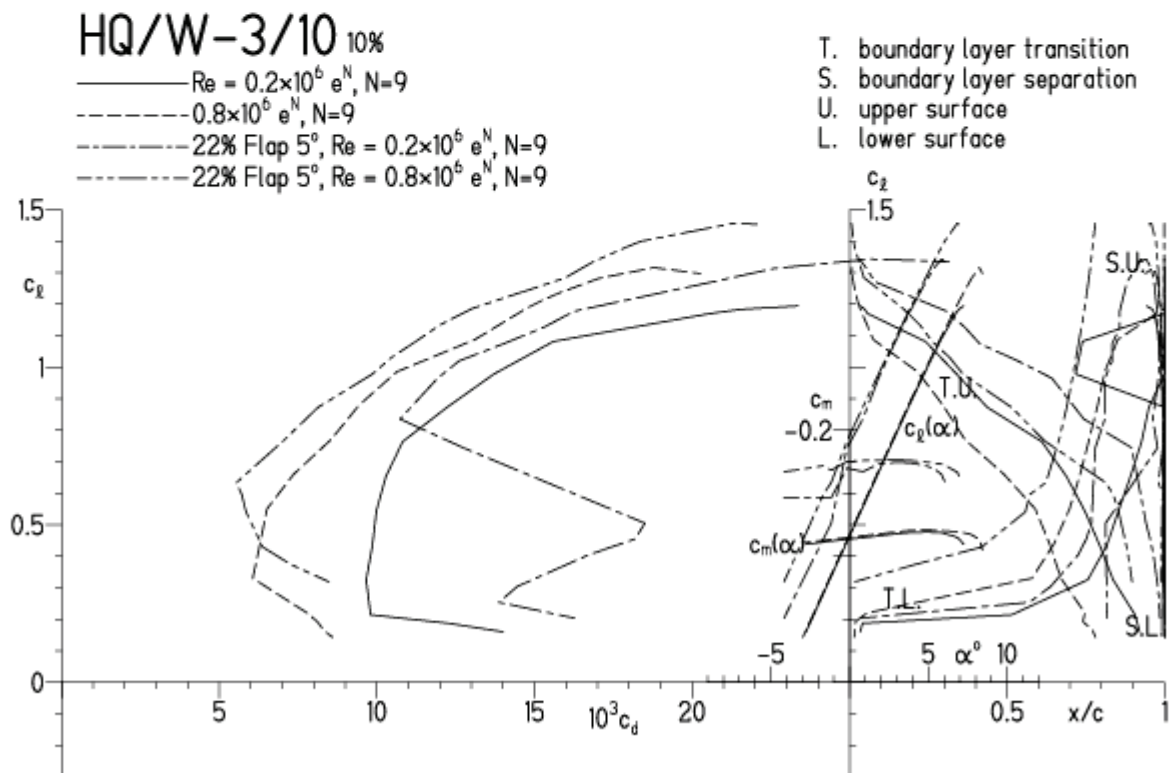


HQ/W-3/10, N=9, mit  $5^\circ$  Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 16.12.10 17:52

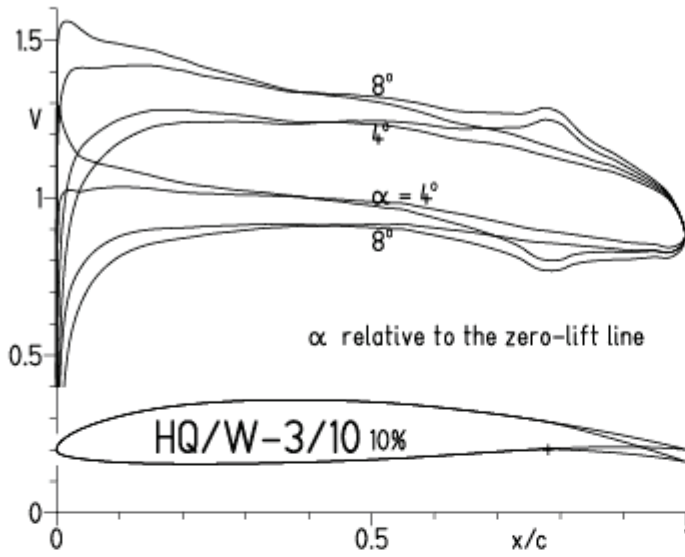


EPPLER 200

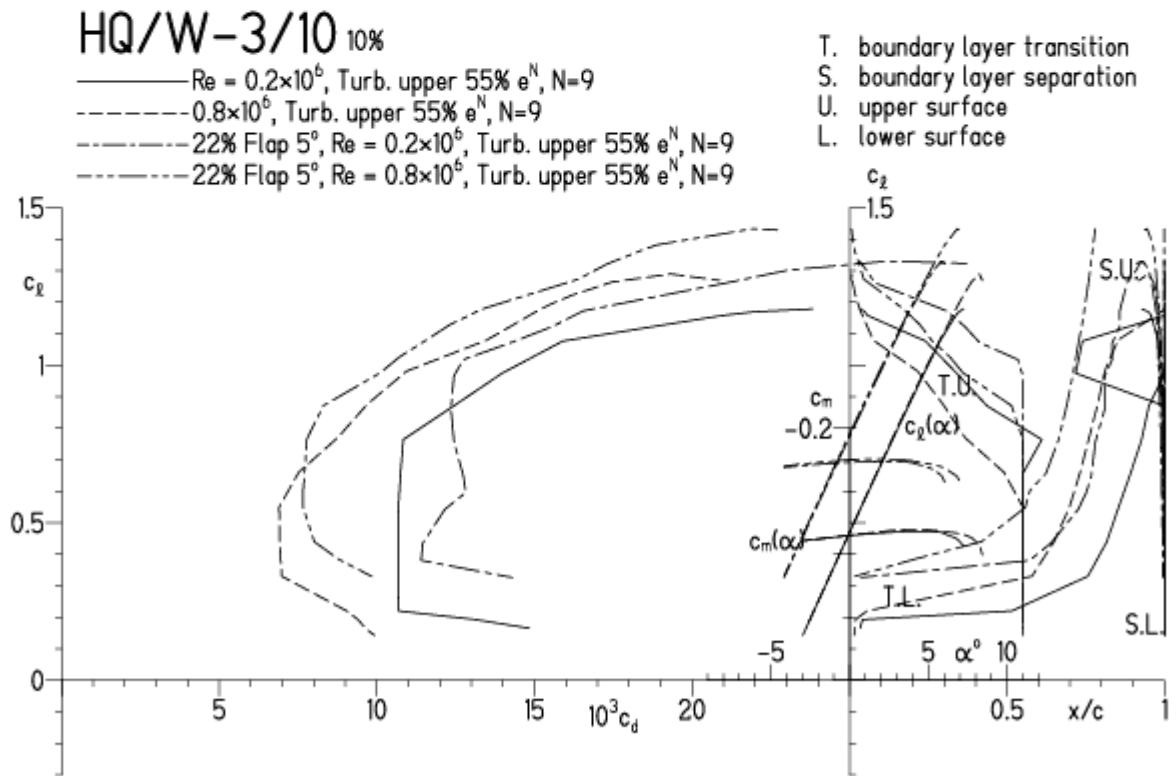


HQ/W-3/10,  $N=9$ , mit  $5^\circ$  Wölbklappenausschlag, Turbulatoreffekt  
(optimale Turbulatorposition bei 50% - 60% der Profiltiefe)

EPPLER 2005 V. 8.5.07 RUN 16.12.10 17:57

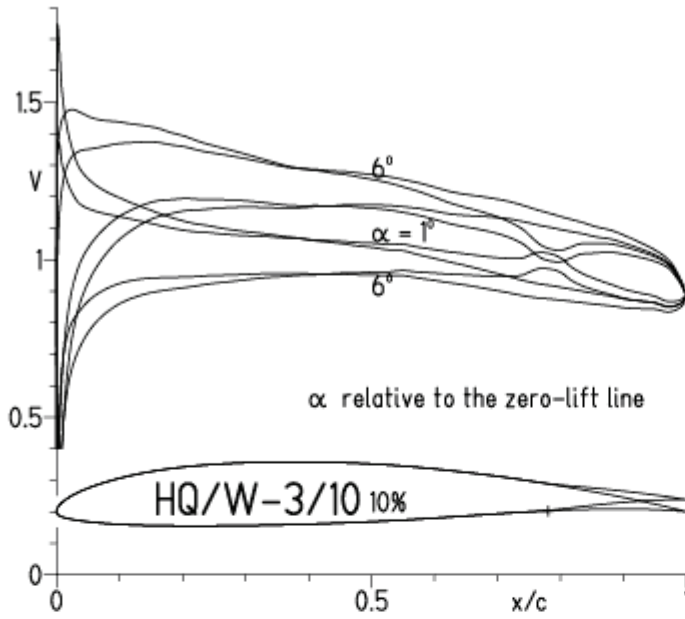


EPPLER 2005 V. 8.5.07 RUN 16.12.10 17:57

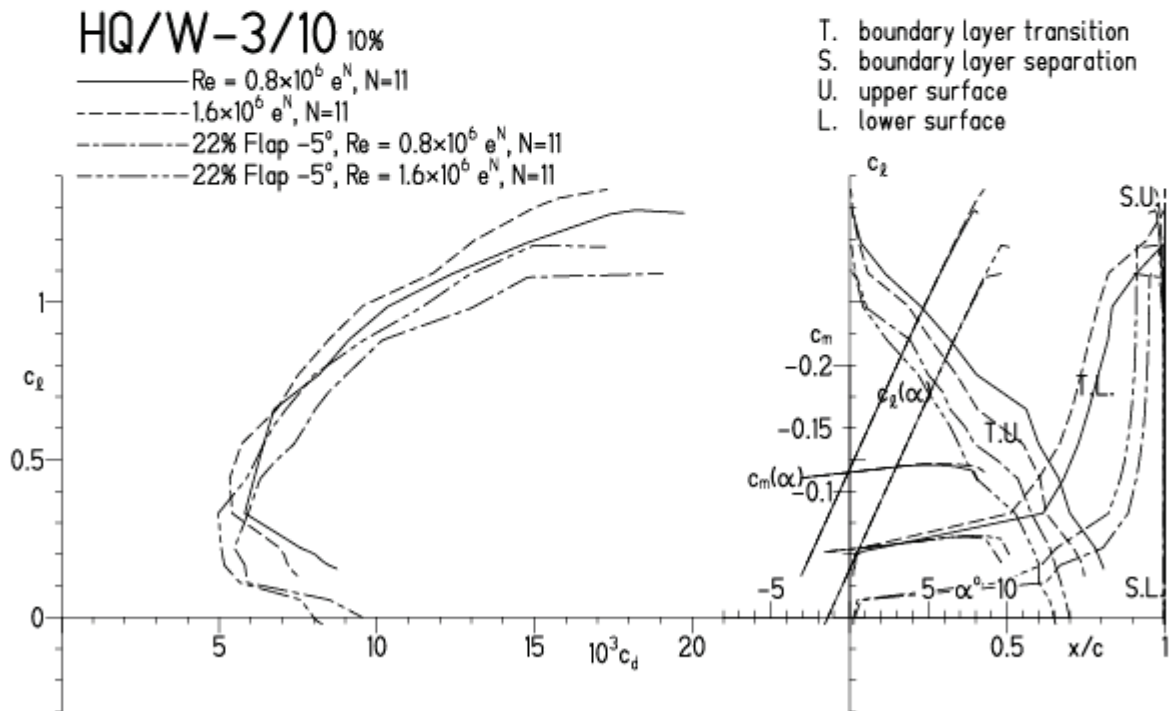


HQ/W-3/10, N=11, mit  $-5^\circ$  Wölbklappenausschlag (Schnellflug)

EPPLER 2005 V. 8.5.07 RUN 23.12.10 12:04

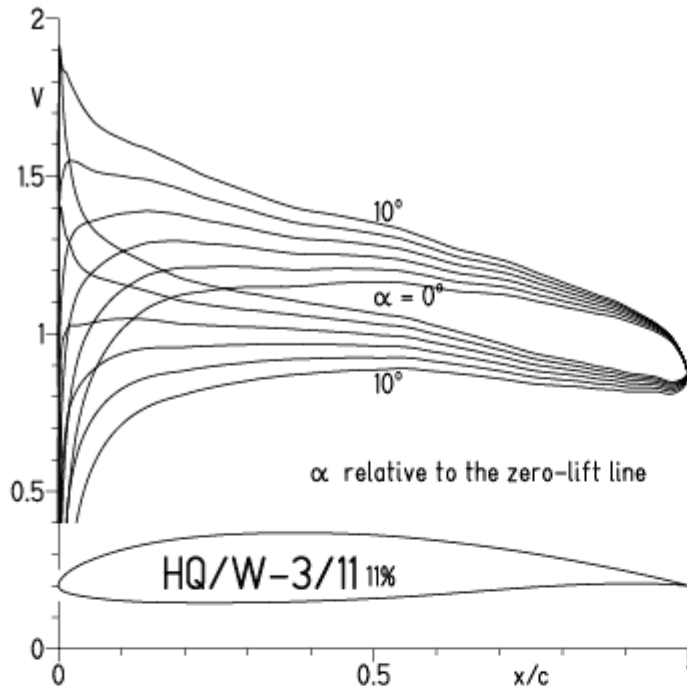


EPPLER 2005 V. 8.5.07 RUN 23.12.10 12:04

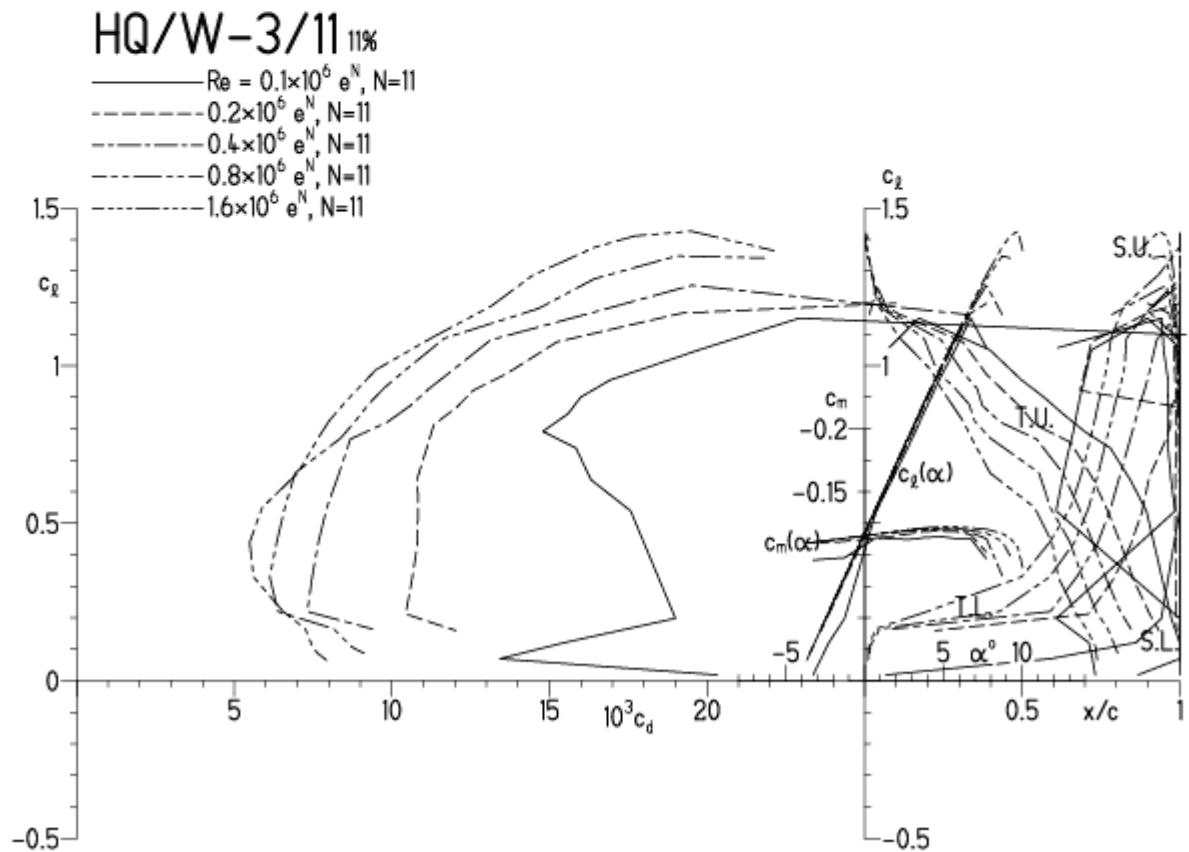


HQ/W-3/11, N=11

EPPLER 2005 V. 8.5.07 RUN 7.12.10 18:32



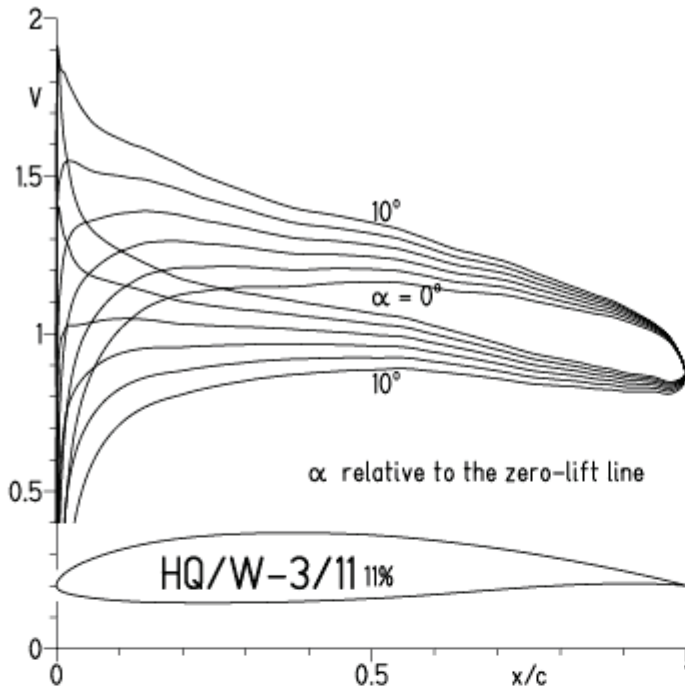
EPPLER 2005 V. 8.5.07 RUN 7.1



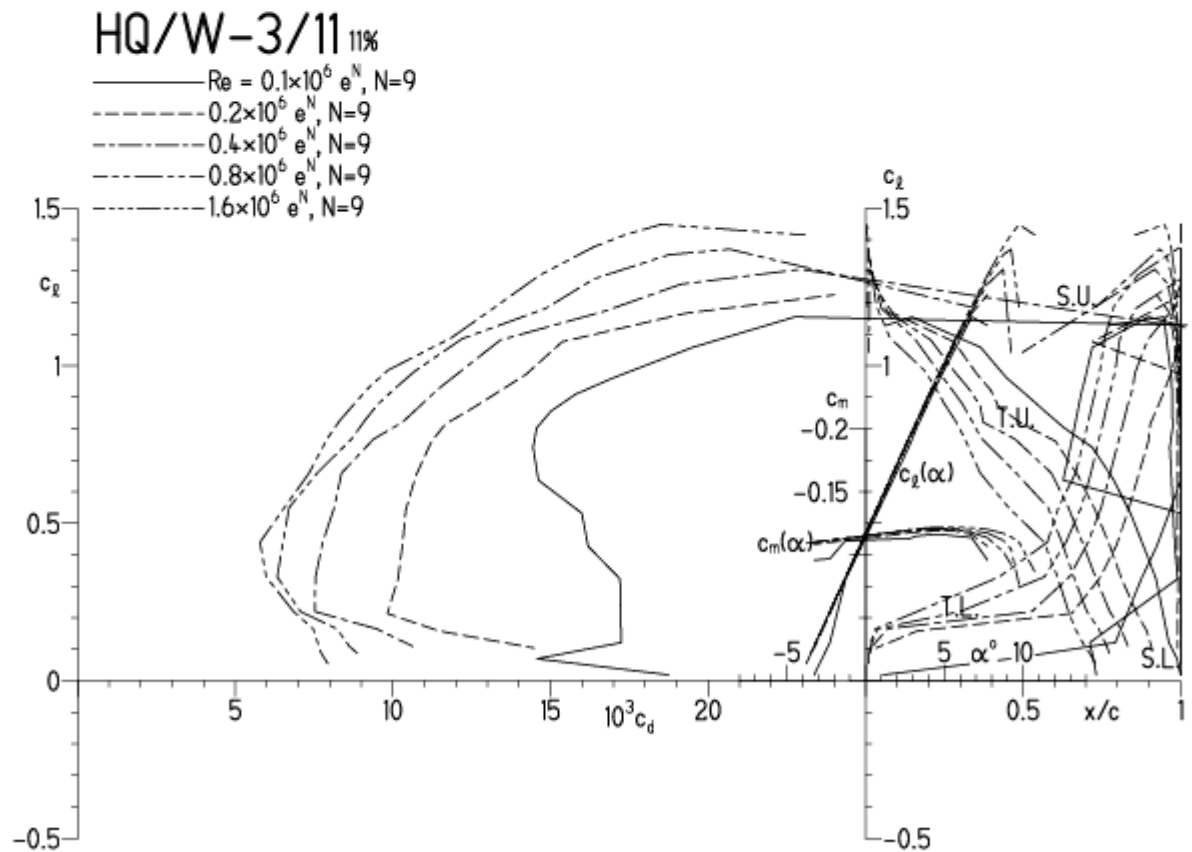
HQ/W-3/11, N=9



EPPLER 2005 V. 8.5.07 RUN 7.12.10 18:59

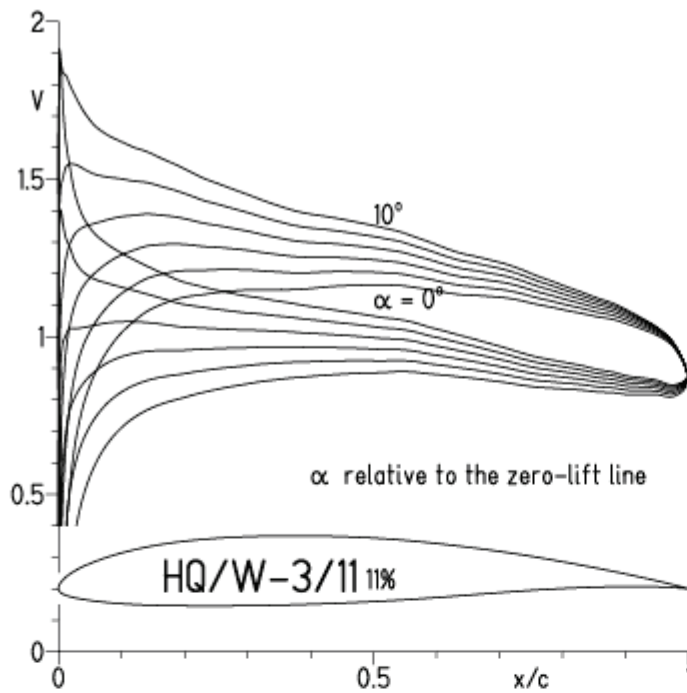


EPPLER 2005 V. 8.5.07 RUN 7.12.10 1



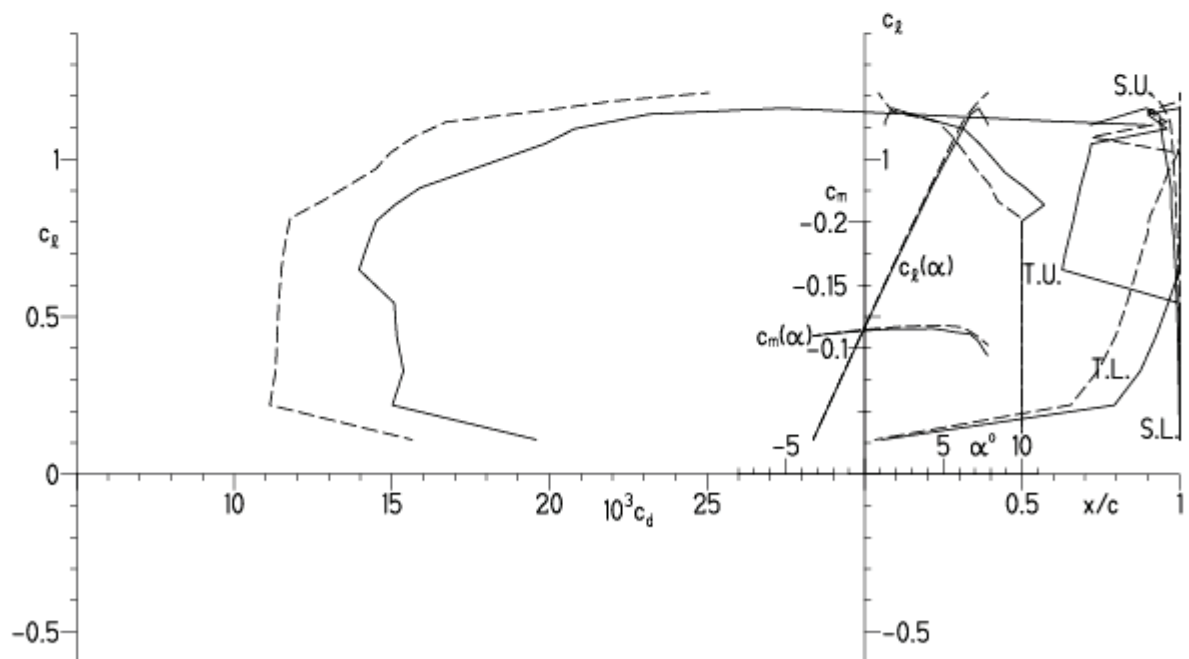
HQ/W-3/11, N=9, Turbulatoreffekt bei niedrigen Re-Zahlen

EPPLER 2005 V. 8.5.07 RUN 15.12.10 17:21



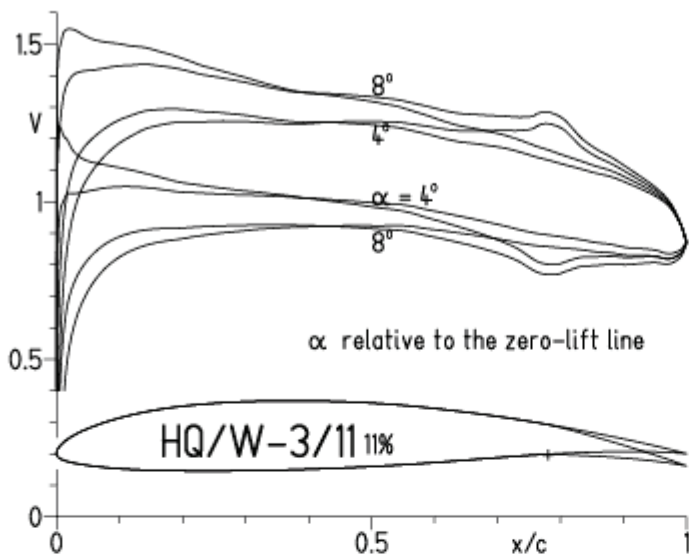
EPPLER 2005 V. 8.5.07 RUN 15.12.10 17:21

HQ/W-3/11 11%

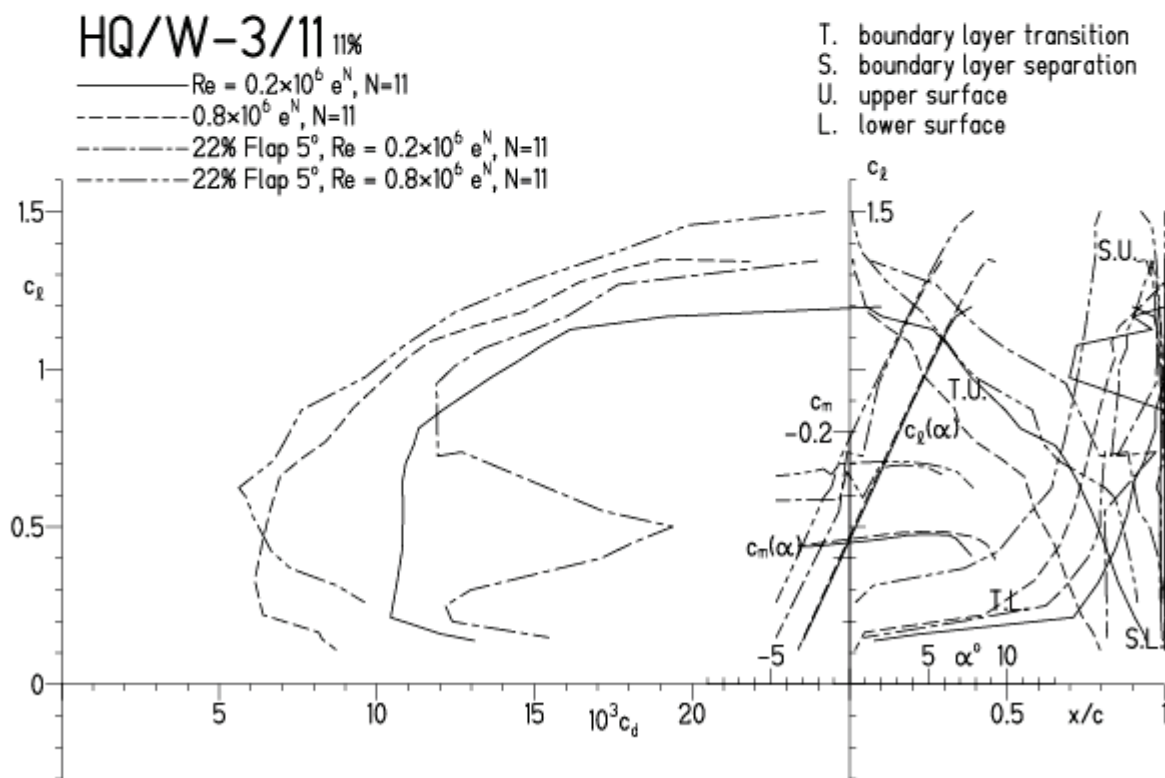
—  $Re = 0.1 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$ - - -  $0.2 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$ 

HQ/W-3/11, N=11, mit 5° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 15.12.10 17:51

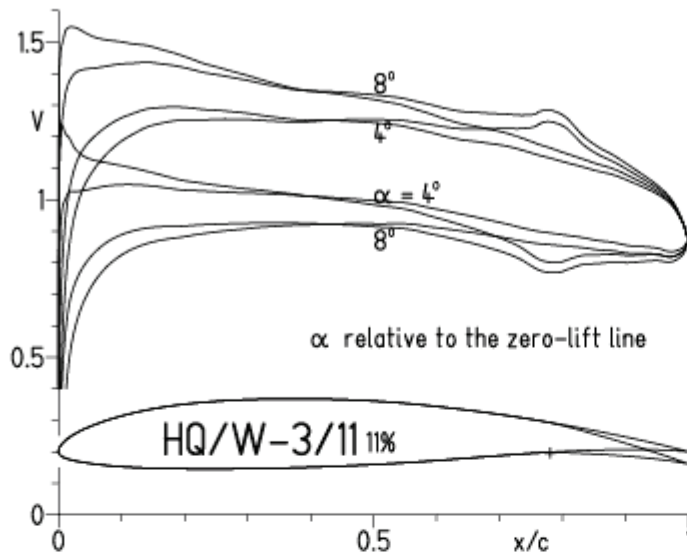


EPPLER 2005 V. 8.

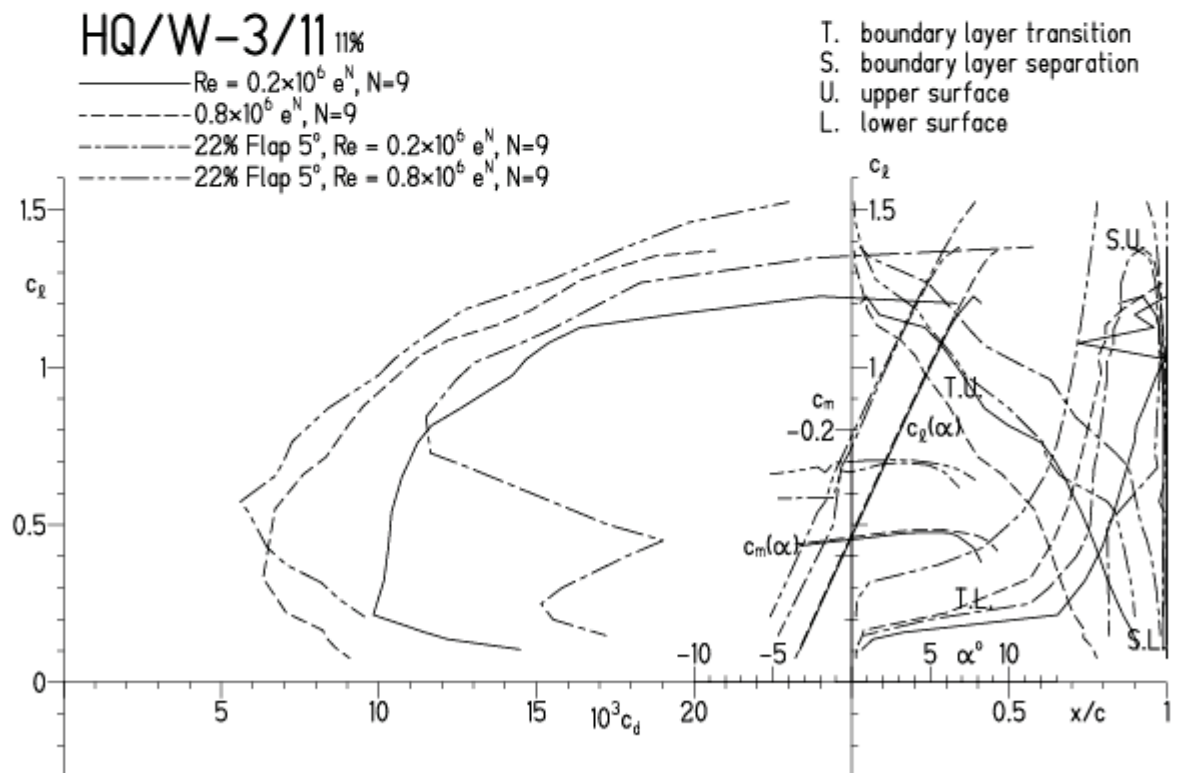


HQ/W-3/11, N=9, mit 5° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 15.12.10 17:55

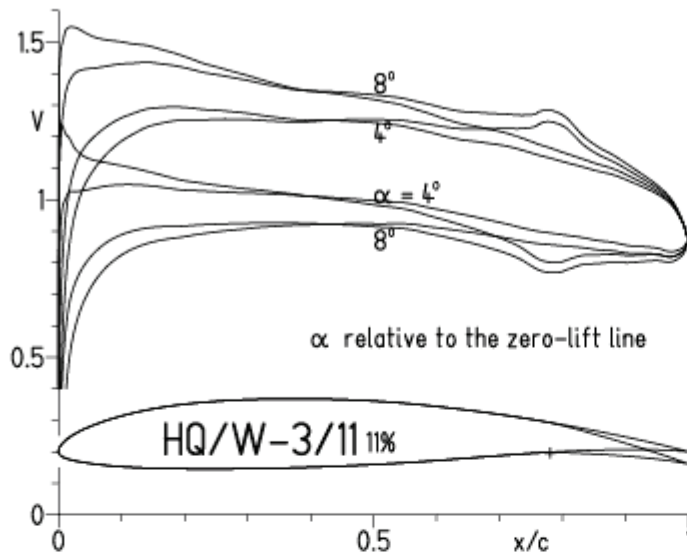


EPPLER 2005 V. 8.5.07 RUN 15.12.10

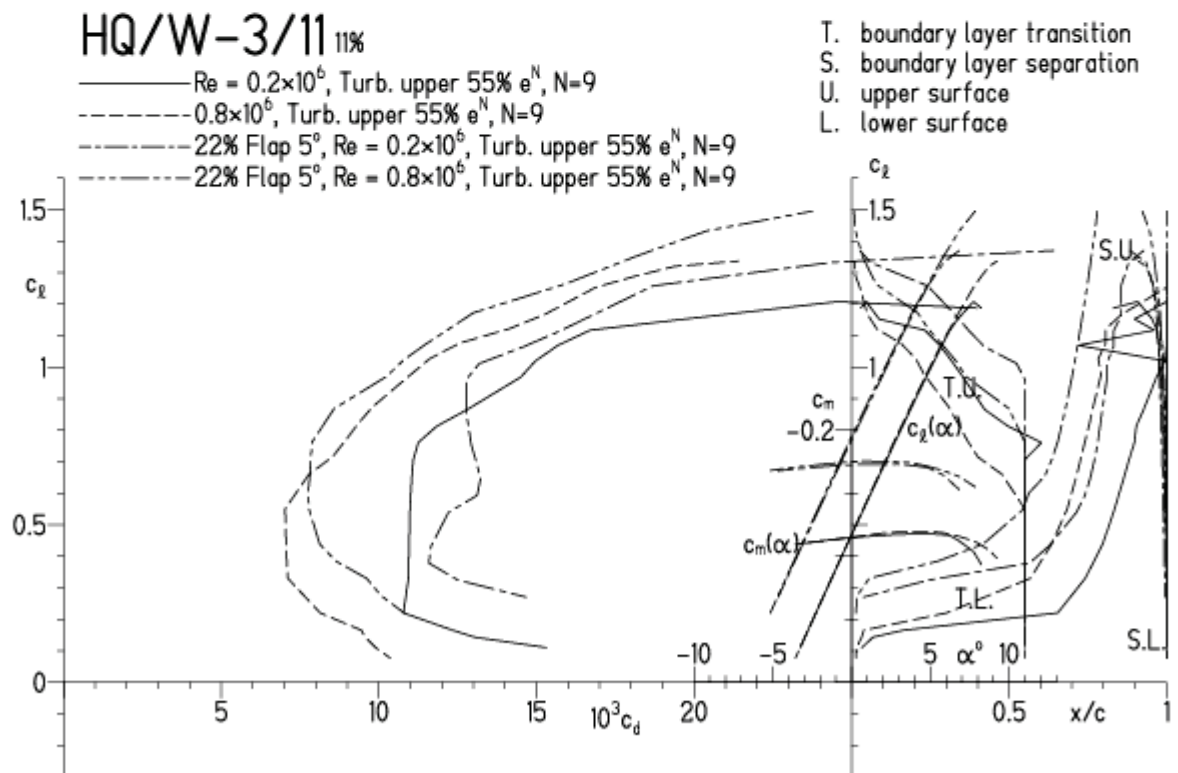


HQ/W-3/11,  $N=9$ , mit  $5^\circ$  Wölbklappenausschlag, Turbulatoreffekt  
(optimale Turbulatorposition bei 50% - 60% der Profiltiefe)

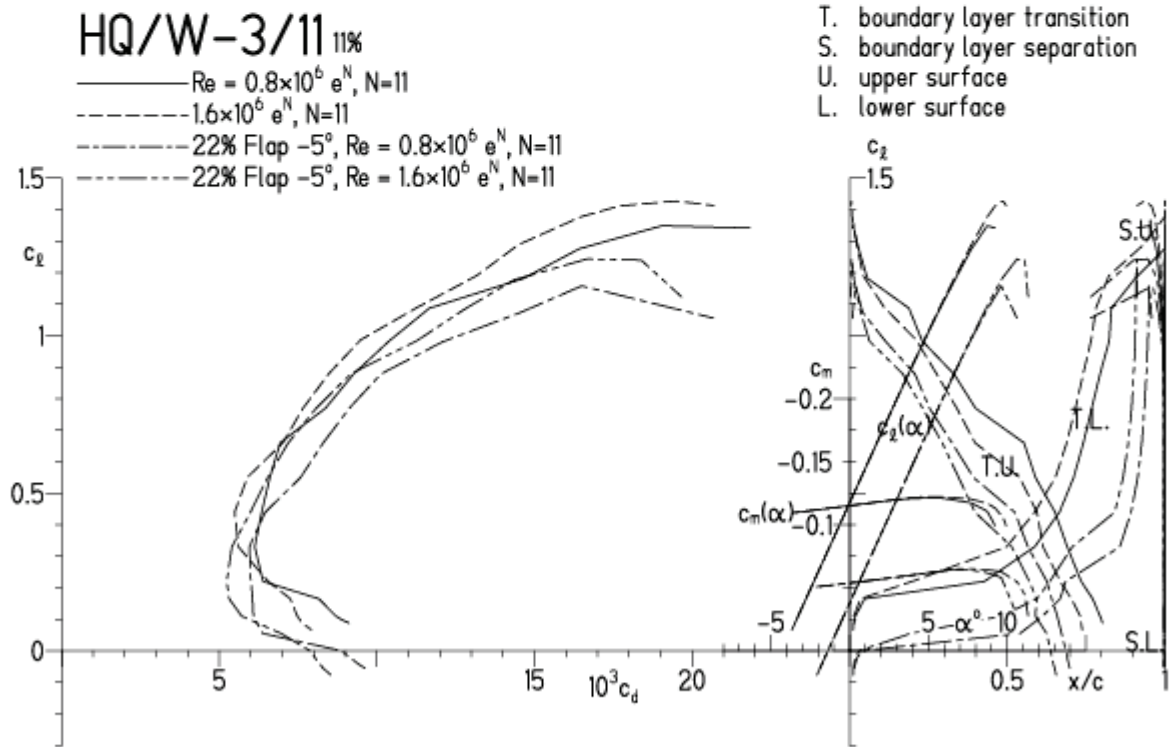
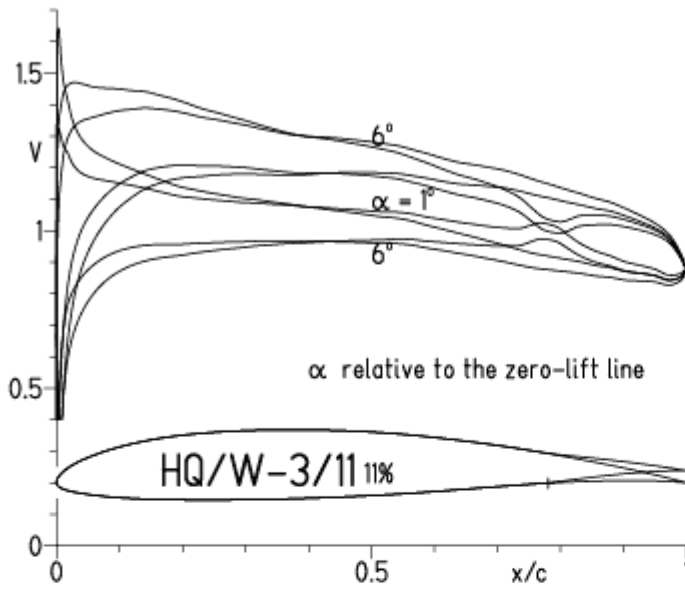
EPPLER 2005 V. 8.5.07 RUN 15.12.10 18:02



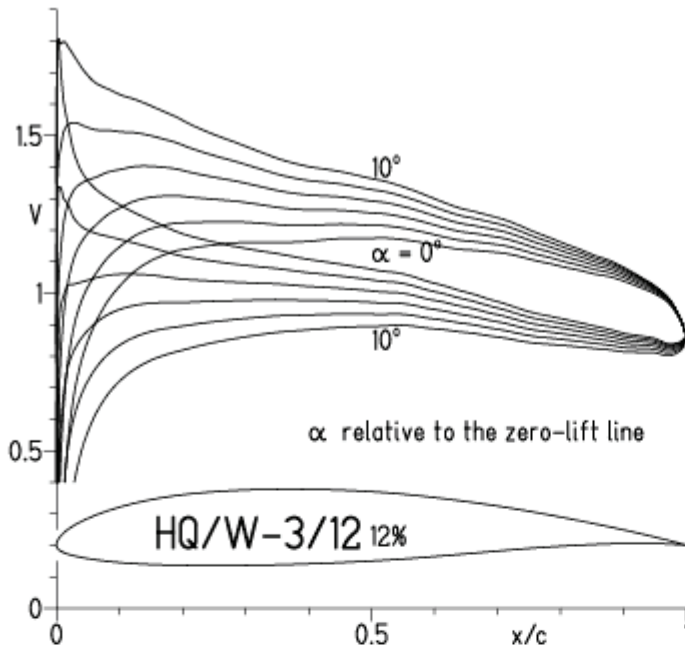
EPPLER 2005 V. 8.5.07 RUN 15.12.10 18:02



HQ/W-3/11,  $N=11$ , mit  $-5^\circ$  Wölbklappenausschlag (Schnellflug)



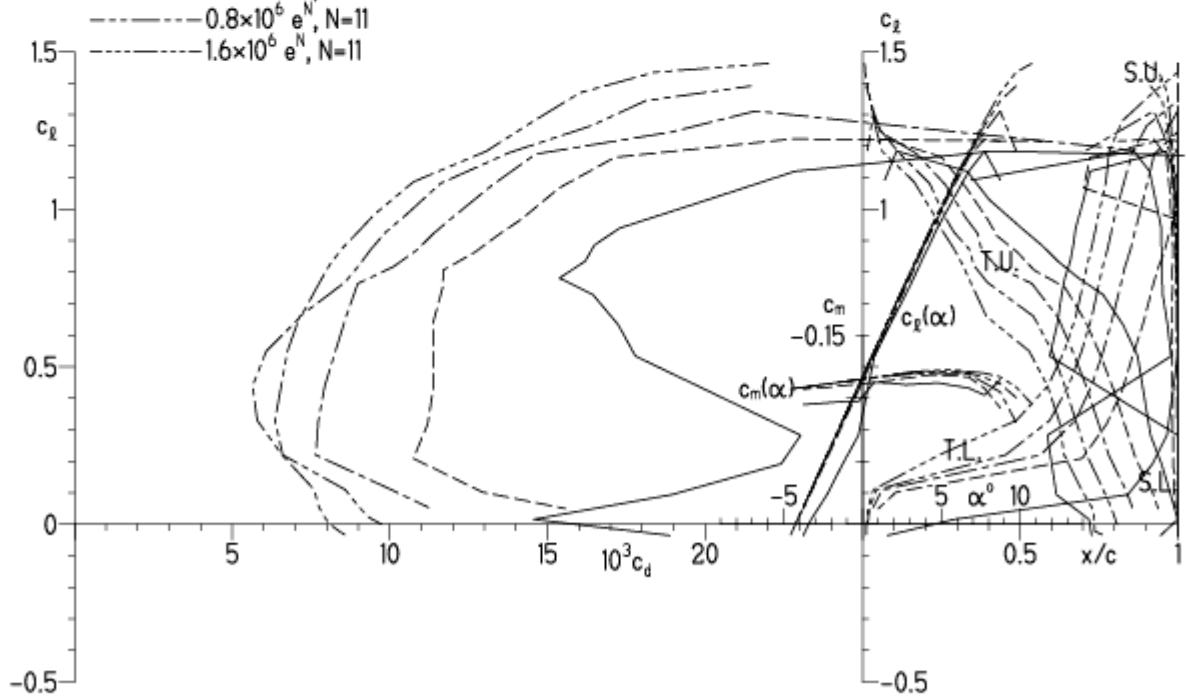
EPPLER 2005 V. 8.5.07 RUN 2.12.10 11:06



EPPLER 200

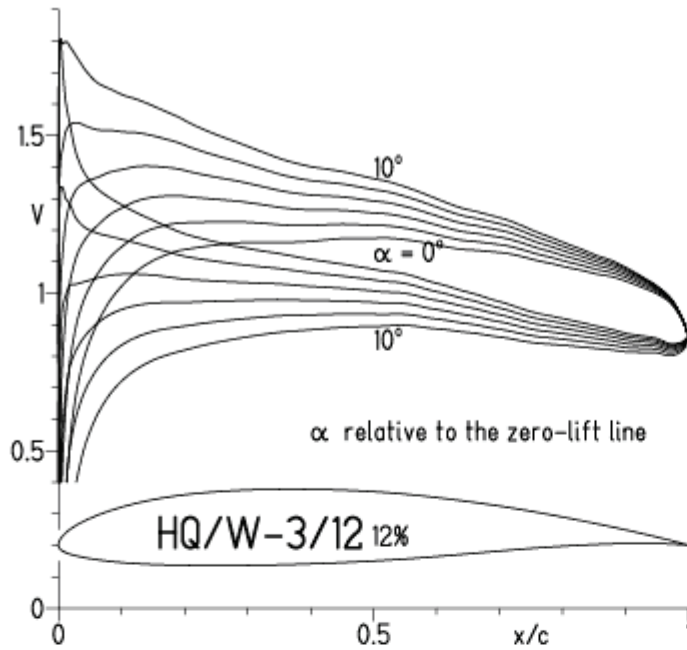
**HQ/W-3/12 12%**

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

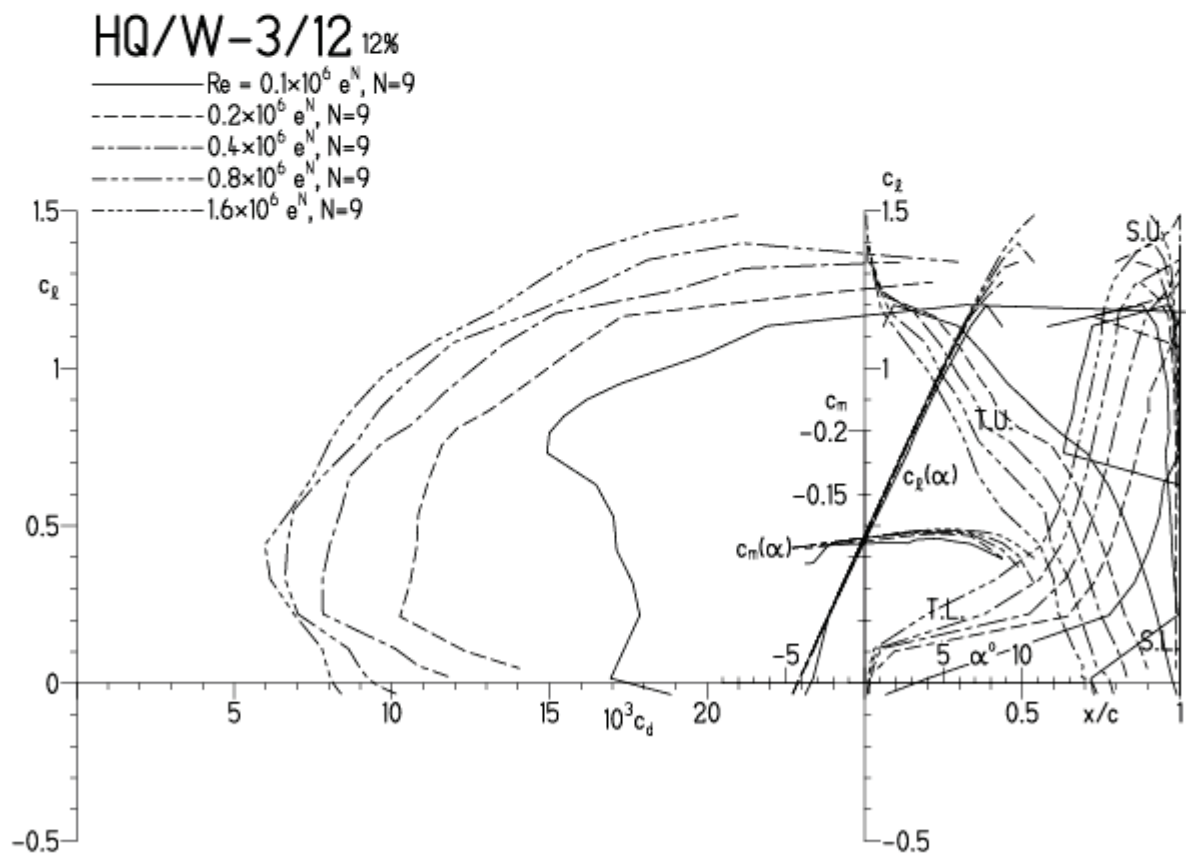


HQ/W-3/12, N=9

EPPLER 2005 V. 8.5.07 RUN 2.12.10 11:09



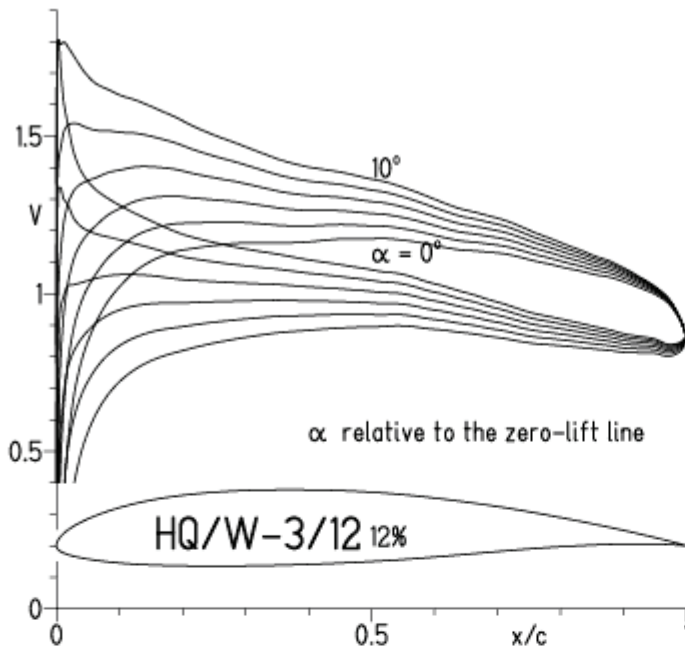
EPPLER 2005 V. 8.5.07 RUN



HQ/W-3/12,  $N=9$ , Turbulatoreffekt bei niedrigen Re-Zahlen



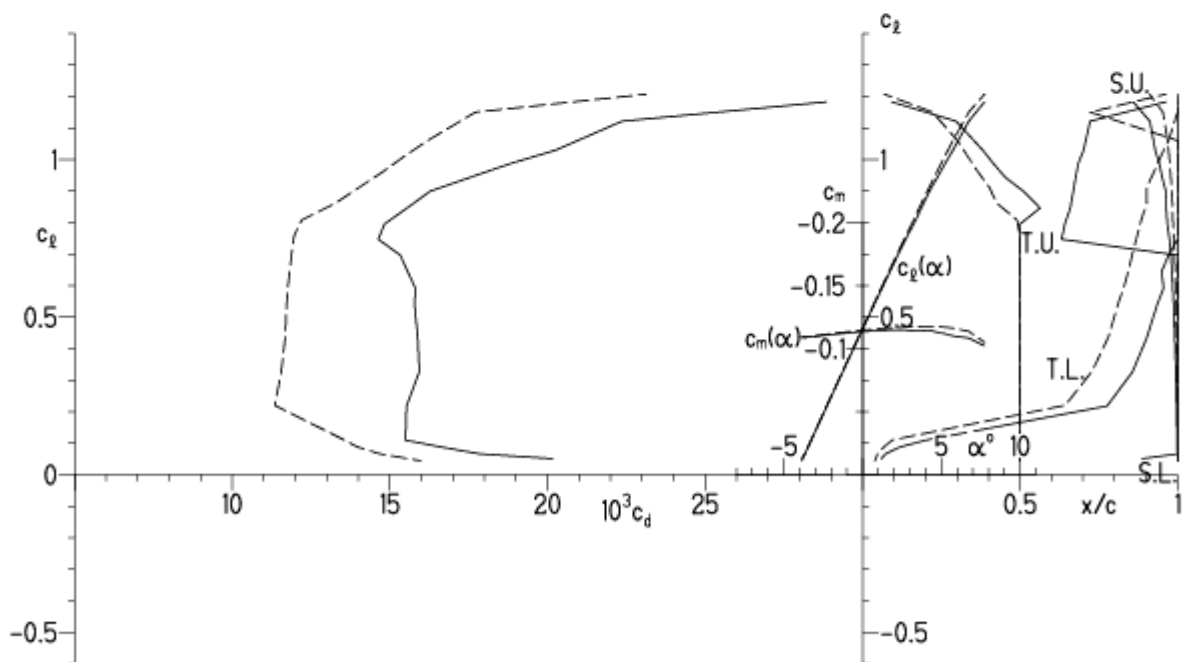
EPPLER 2005 V. 8.5.07 RUN 2.12.10 10:47



EPPLER 2005 V. 8.5.07 RUN 2.12.10 10:47

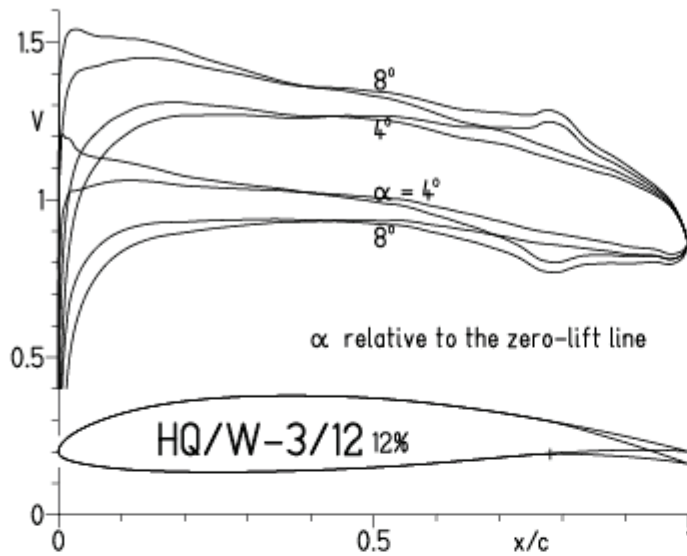
### HQ/W-3/12 12%

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

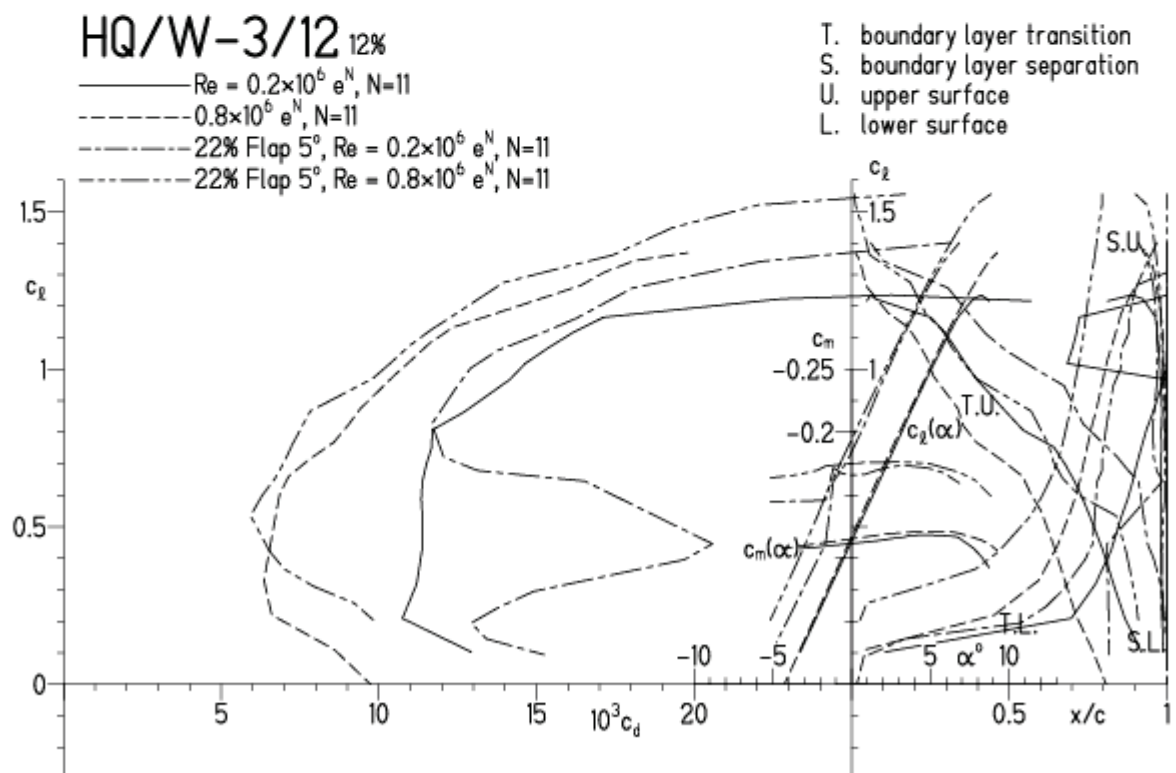


HQ/W-3/12,  $N=11$ , mit  $5^\circ$  Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 15.12.10 18:09

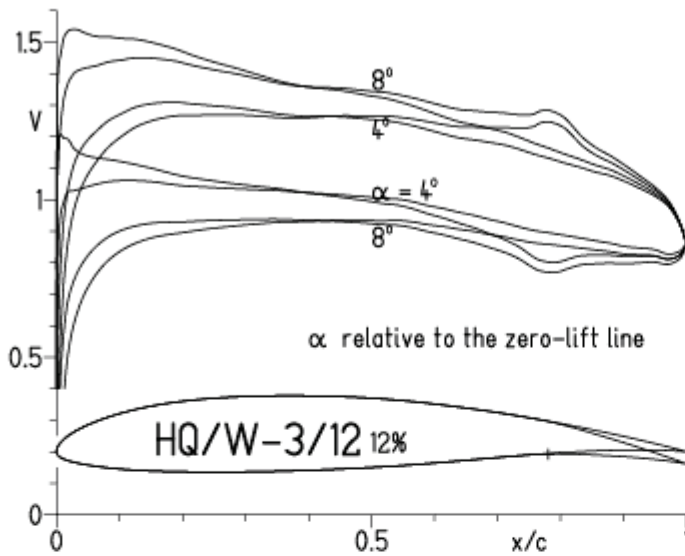


EPPLER 2005 V. 8.

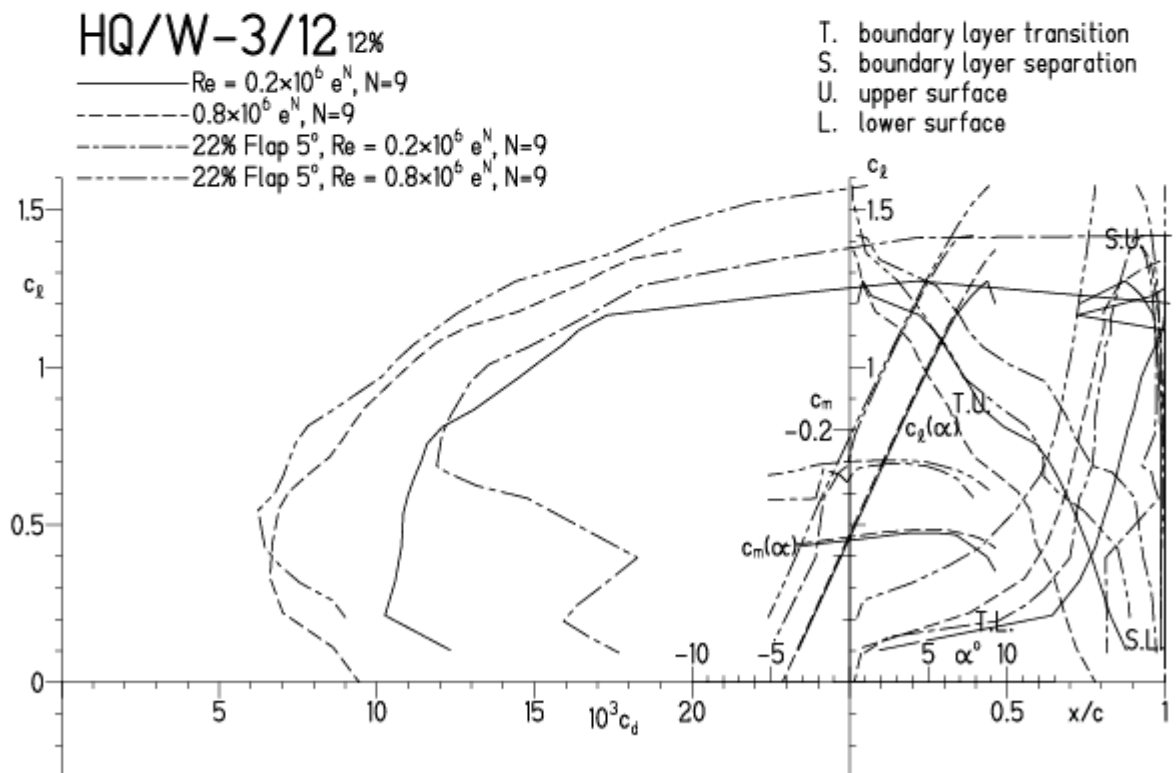


HQ/W-3/12,  $N=9$ , mit  $5^\circ$  Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 2.12.10 9:56

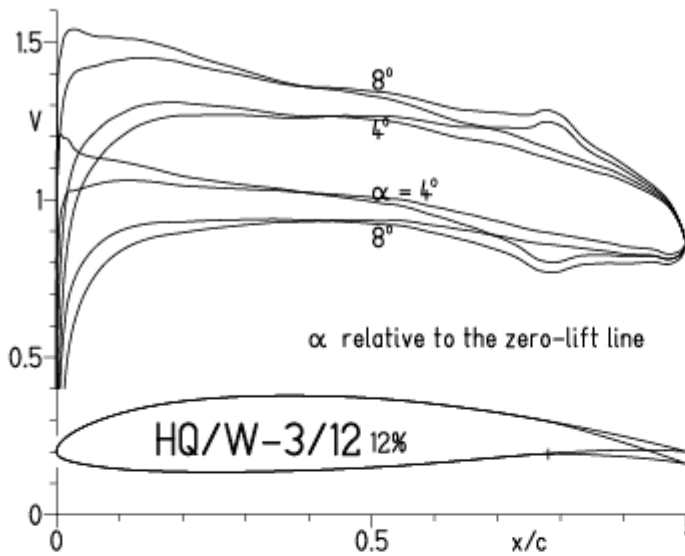


EPPLER 2005 V. 8.5.07 RUN 2.12.10 9:56

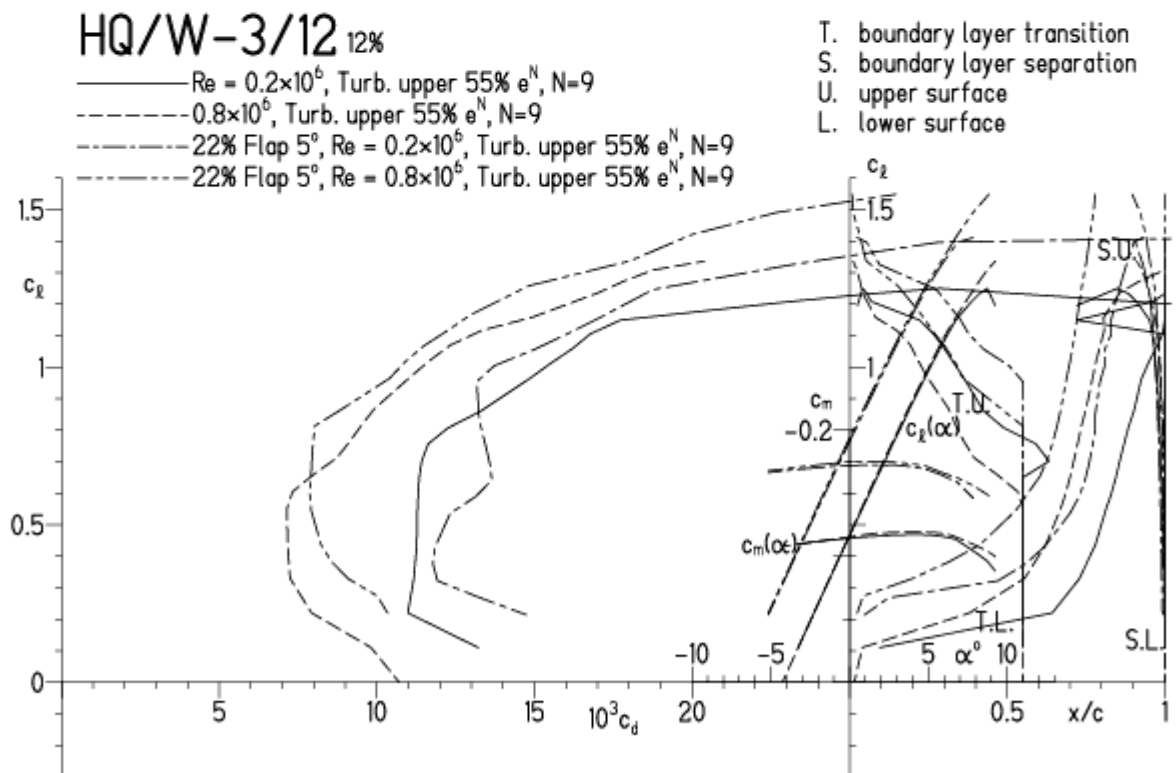


**HQ/W-3/12, N=9, mit 5° Wölbklappenausschlag, Turbulatoreffekt**  
 (optimale Turbulatorposition bei 50% - 60% der Profiltiefe)

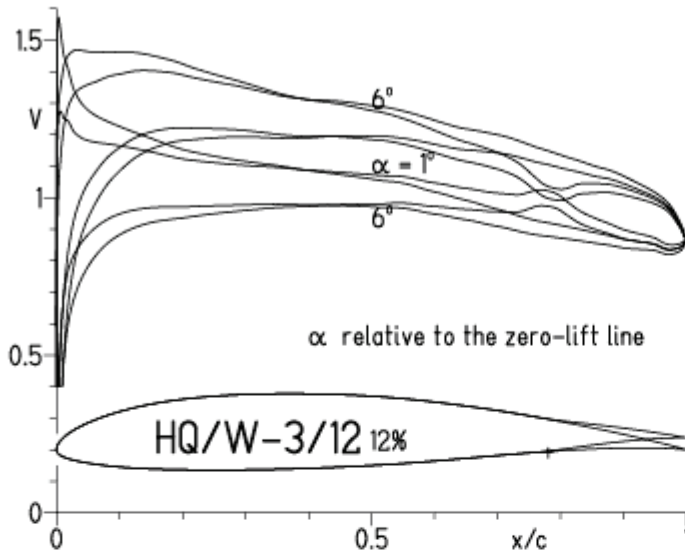
EPPLER 2005 V. 8.5.07 RUN 29.3.10 13:40



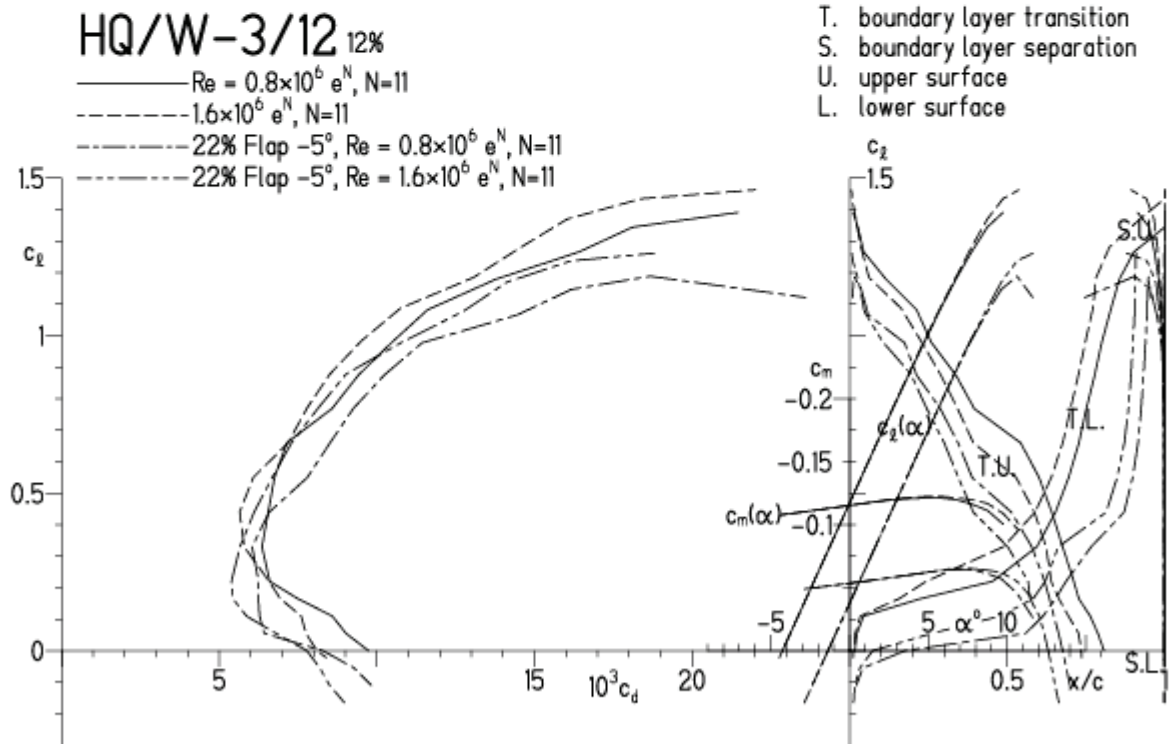
EPPLER 2005 V. 8.5.07 RUN 29.3.10 13:40



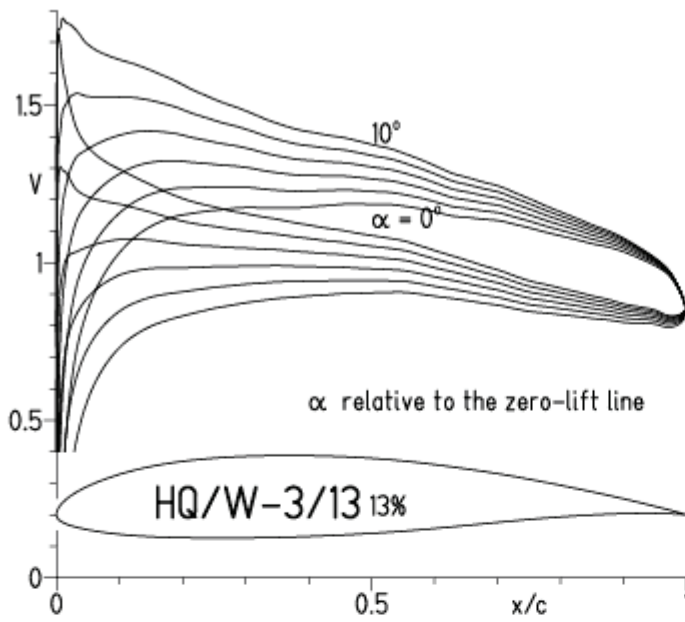
HQ/W-3/12, N=11, mit  $-5^\circ$  Wölbklappenausschlag (Schnellflug)



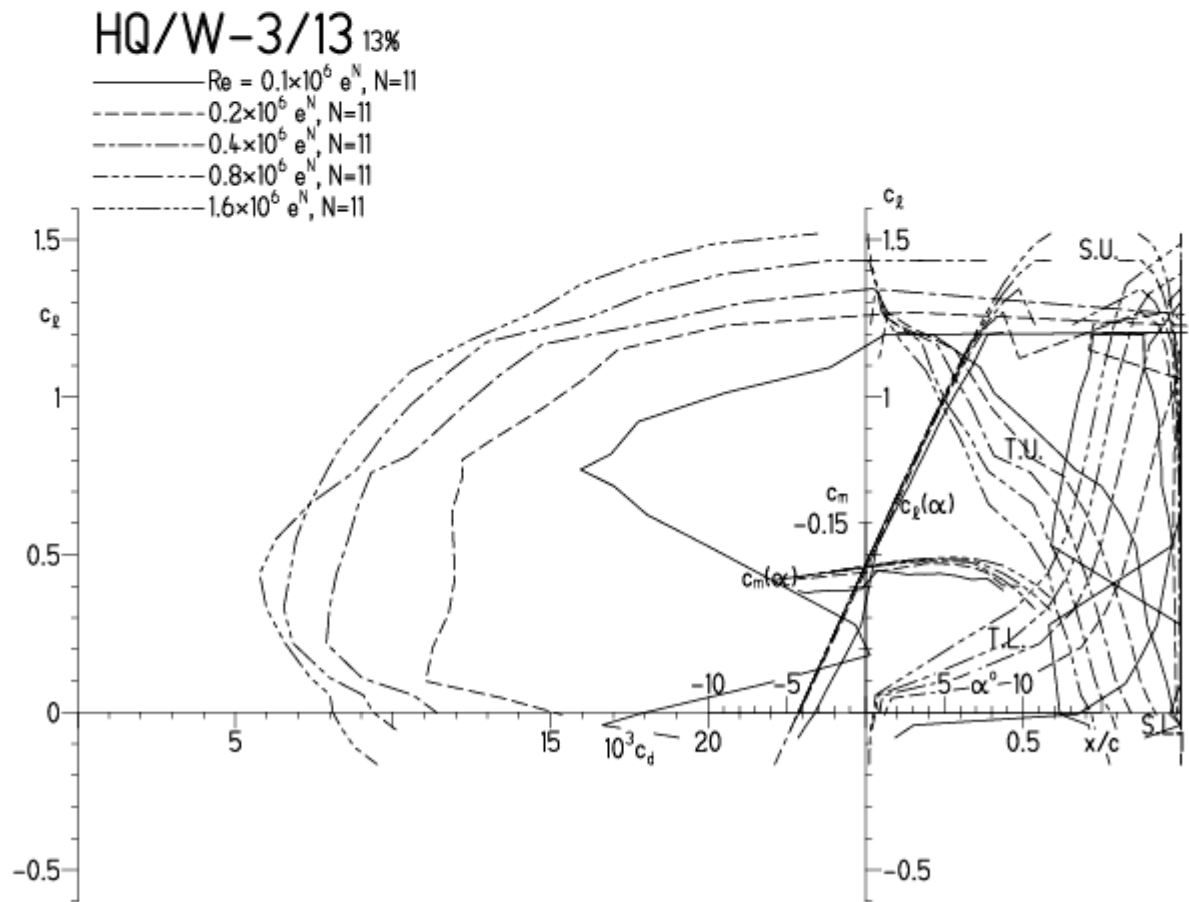
EPPLER



EPPLER 2005 V. 8.5.07 RUN 2.12.10 11:36

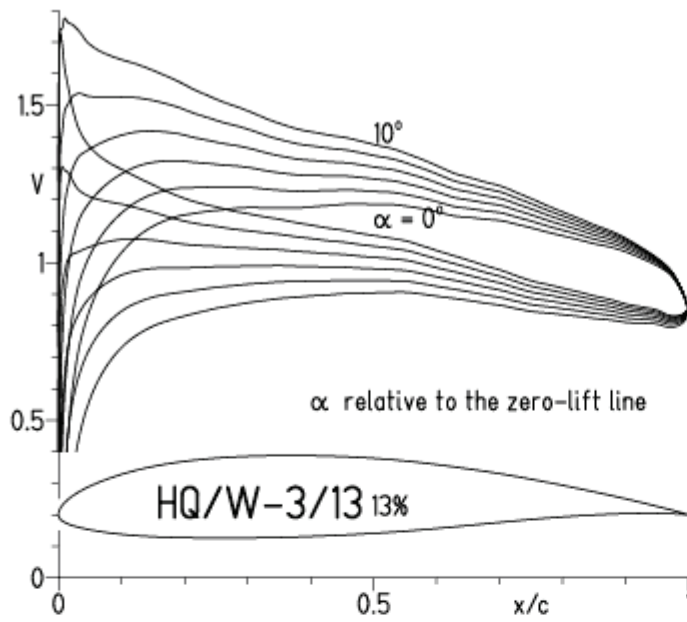


EPPLER 2005 V. 8.5.07 RUN 2.12.10 11:36

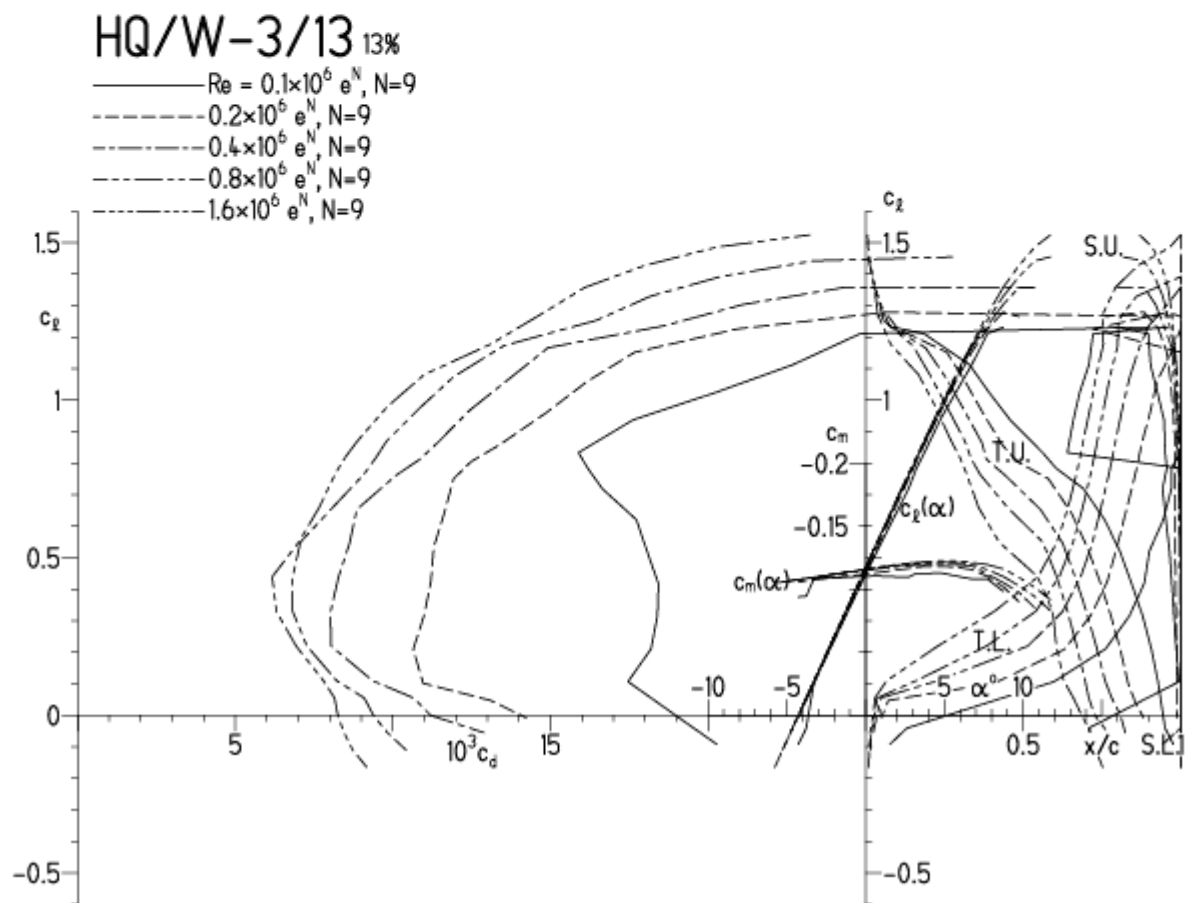


HQ/W-3/13, N=9

EPPLER 2005 V. 8.5.07 RUN 2.12.10 11:39

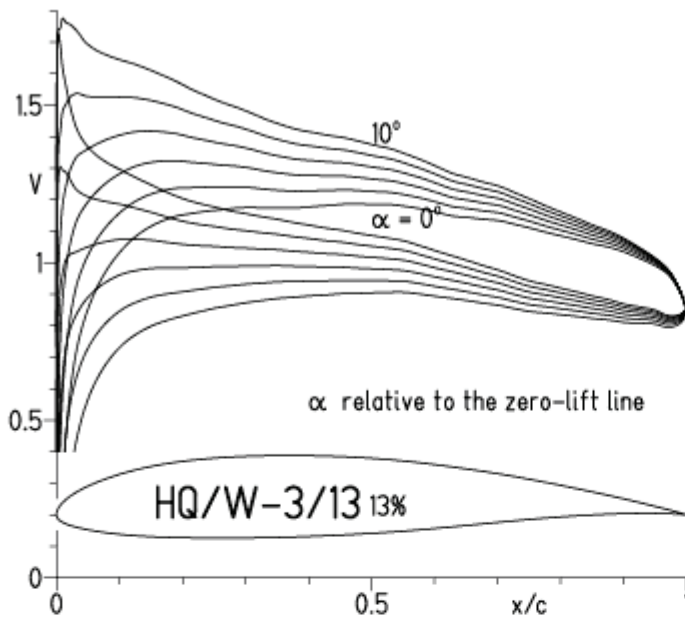


EPPLER 2005 V. 8.5.07 RUN 2.12.10 11:39



HQ/W-3/13, N=9, Turbulatoreffekt bei niedrigen Re-Zahlen

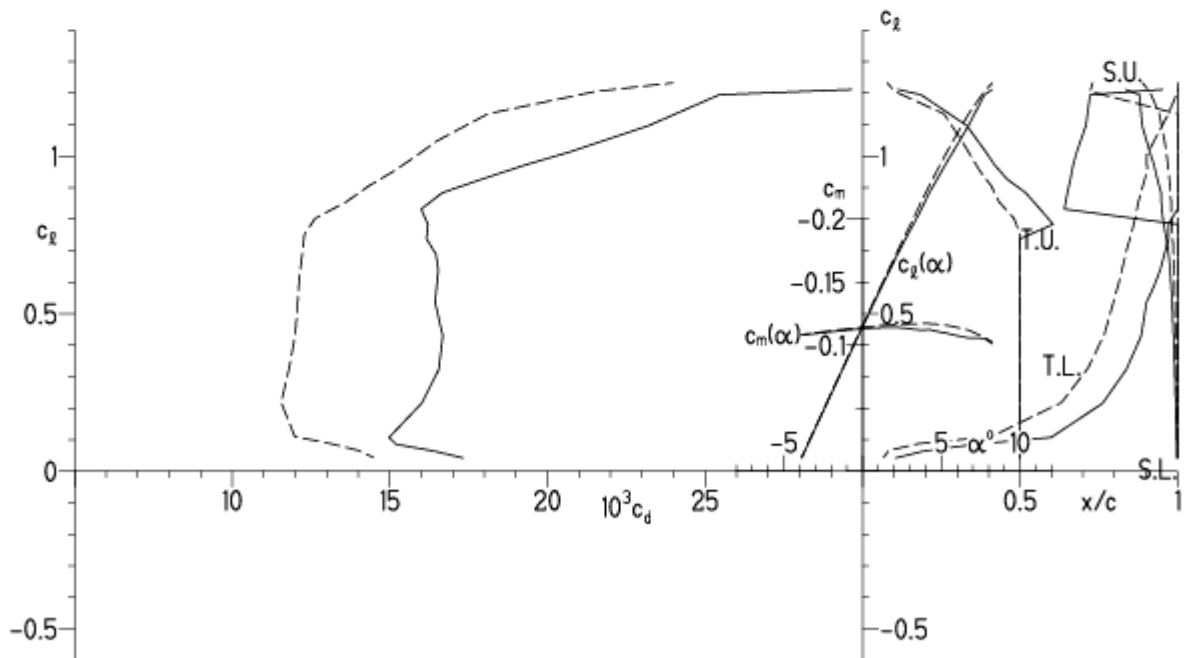
EPPLER 2005 V. 8.5.07 RUN 2.12.10 10:54



EPPLER 2005 V. 8.5.07 RUN 2.12.10 1

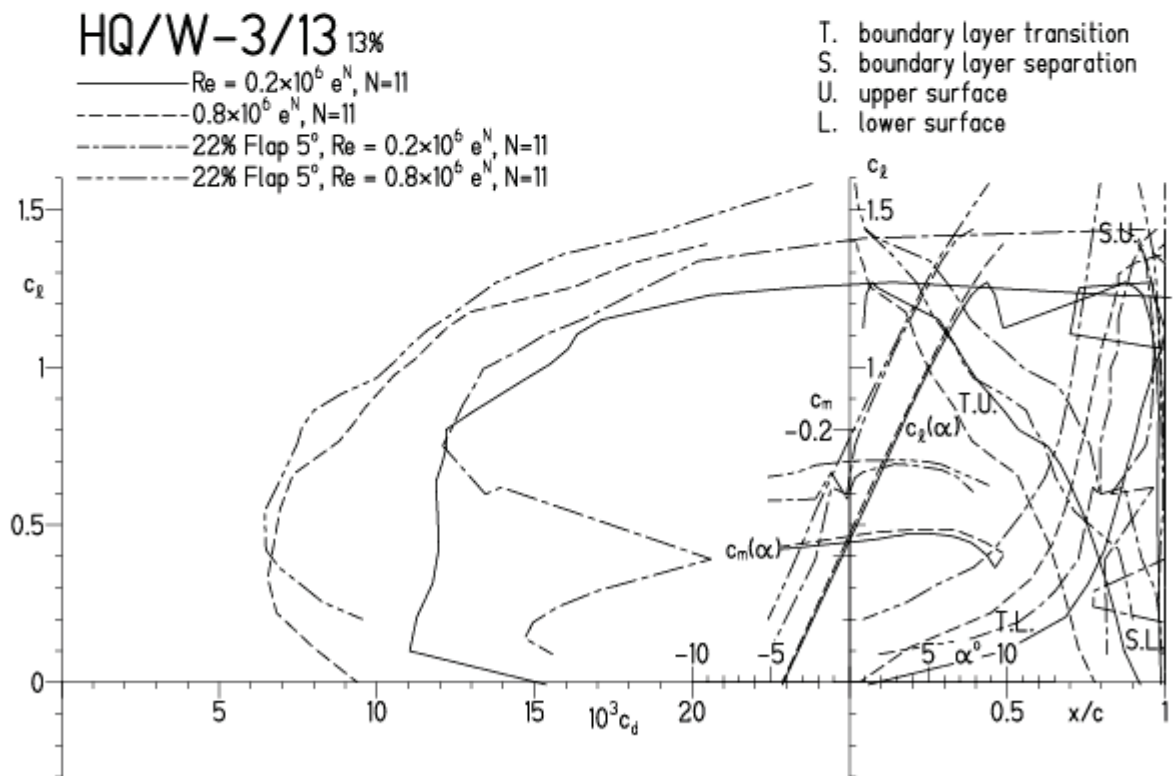
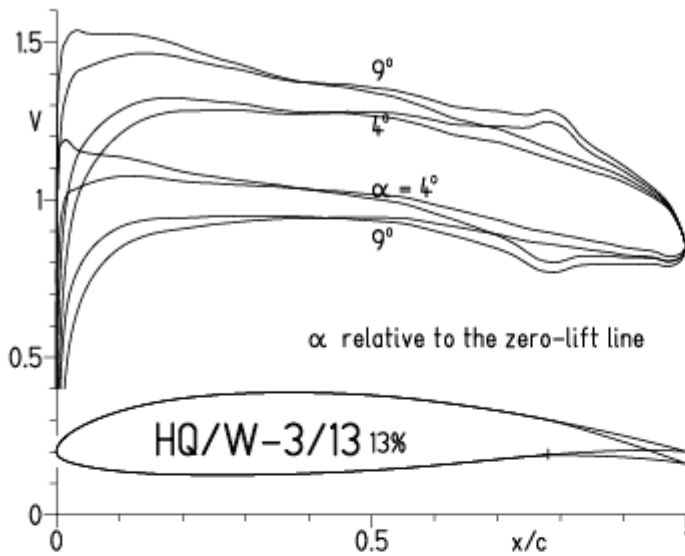
### HQ/W-3/13 13%

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



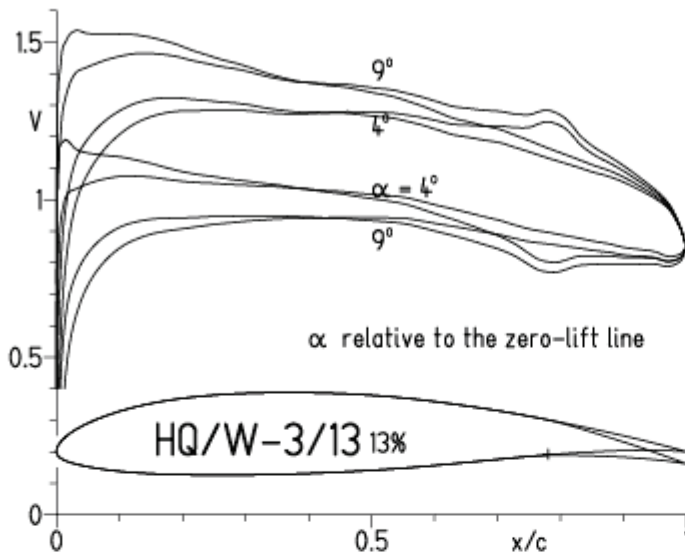
HQ/W-3/13, N=11, mit 5° Wölbklappenausschlag



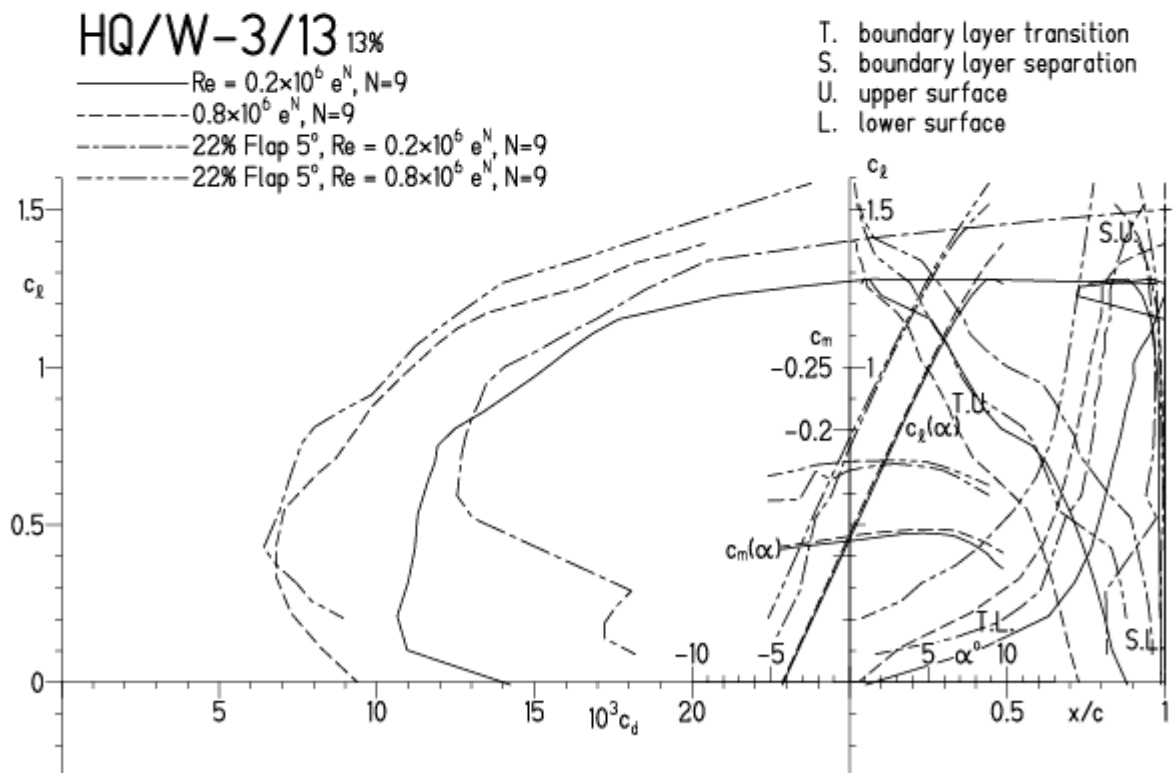


HQ/W-3/13, N=9, mit 5° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 2.12.10 12:12

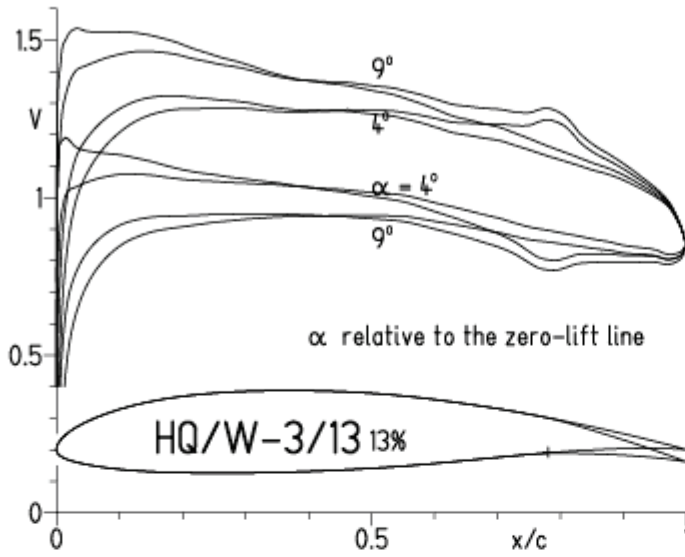


EPPLER 2005 V. 8.5.07 RUN 2.12.10 12:12

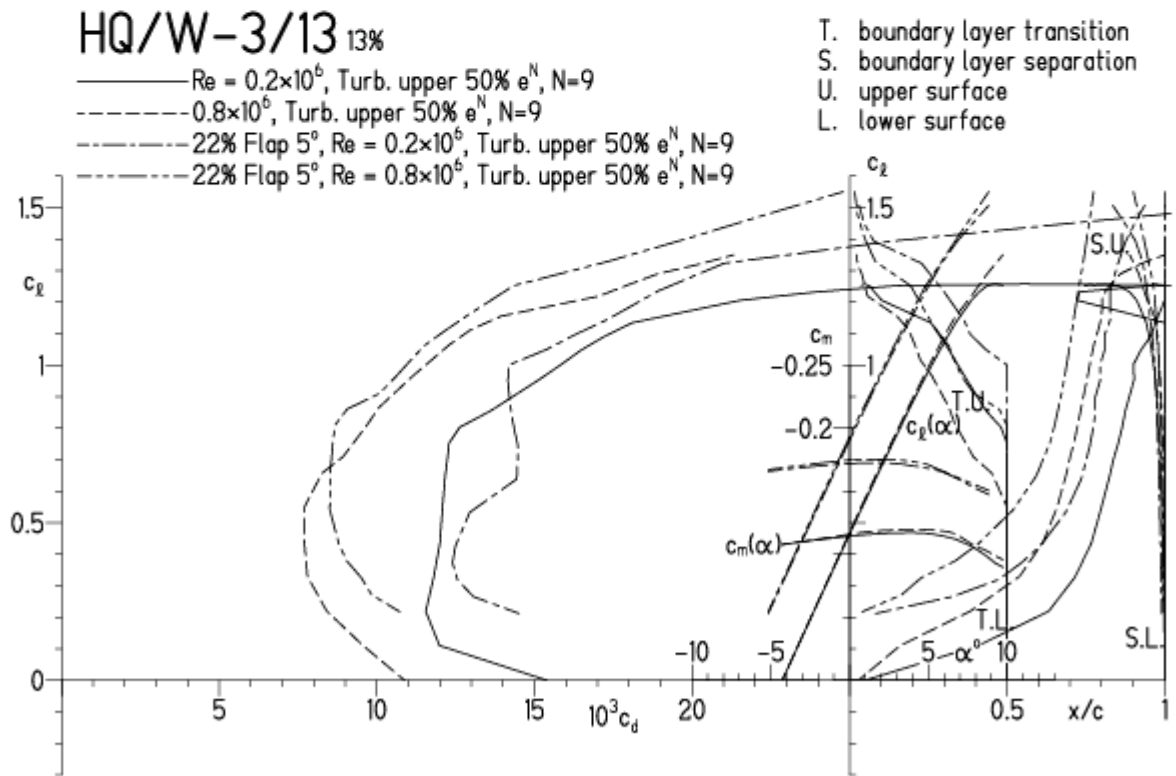


HQ/W-3/13, N=9, mit 5° Wölbklappenausschlag, Turbulatoreffekt (optimale Turbulatorposition bei 50% - 60% der Profiltiefe)

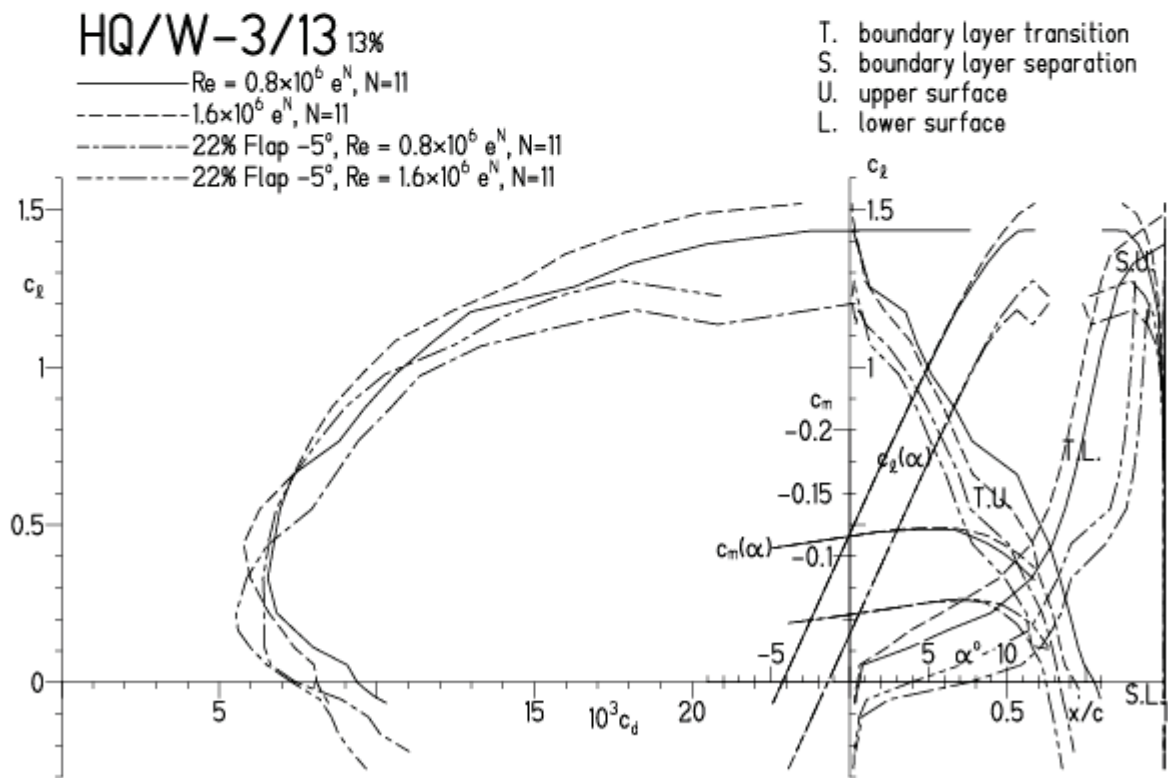
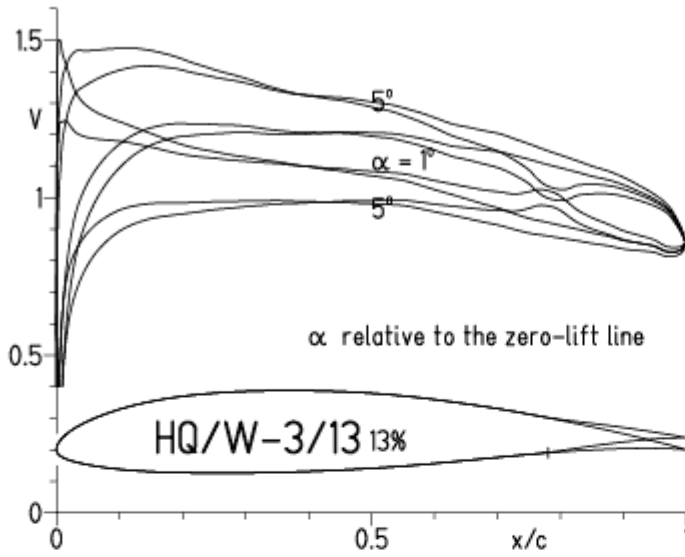
EPPLER 2005 V. 8.5.07 RUN 2.12.10 12:16



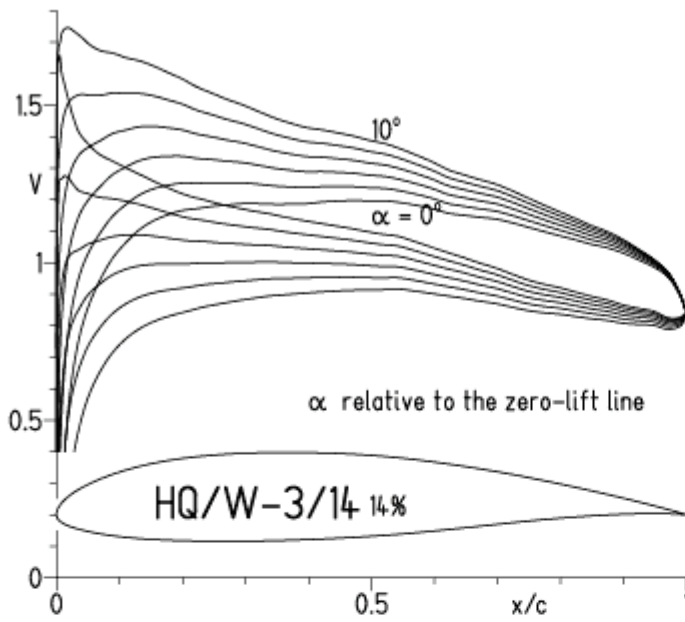
EPPLER 2005 V. 8.



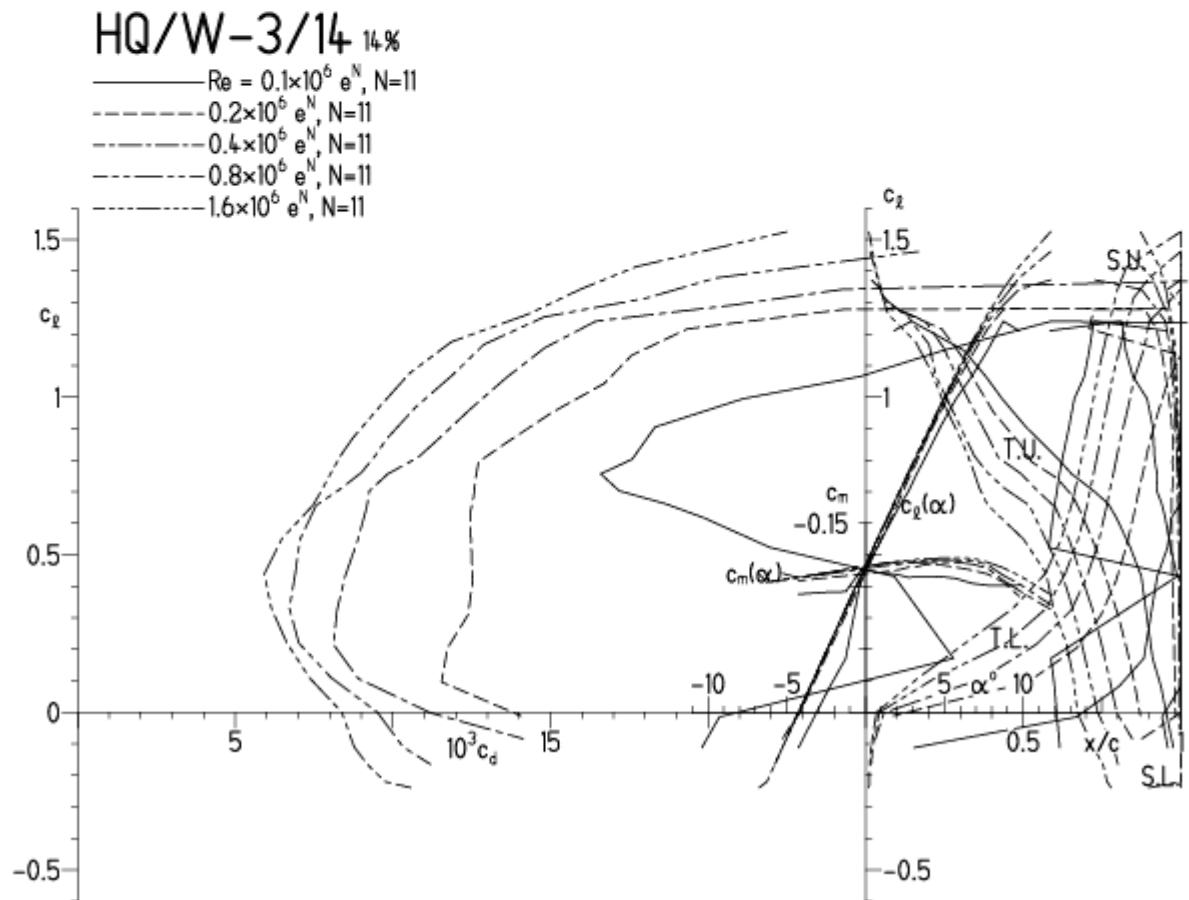
HQ/W-3/13, N=11, mit  $-5^\circ$  Wölbklappenausschlag (Schnellflug)



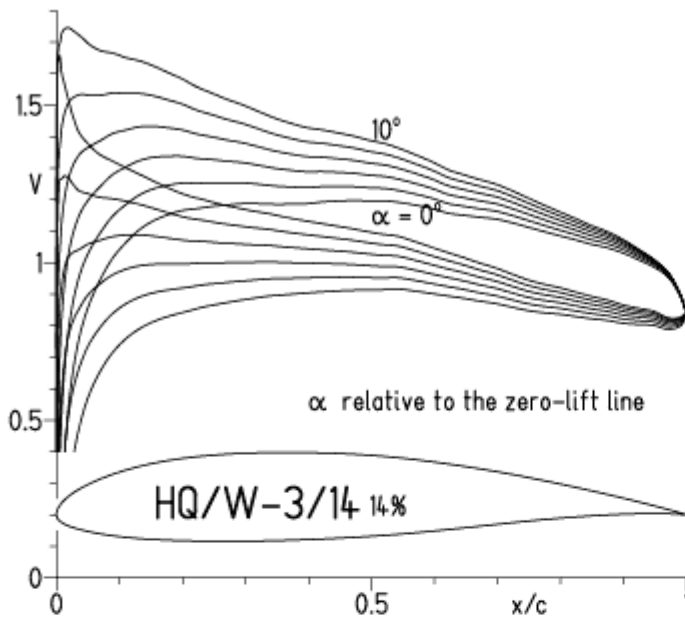
EPPLER 2005 V. 8.5.07 RUN 2.12.10 12:55



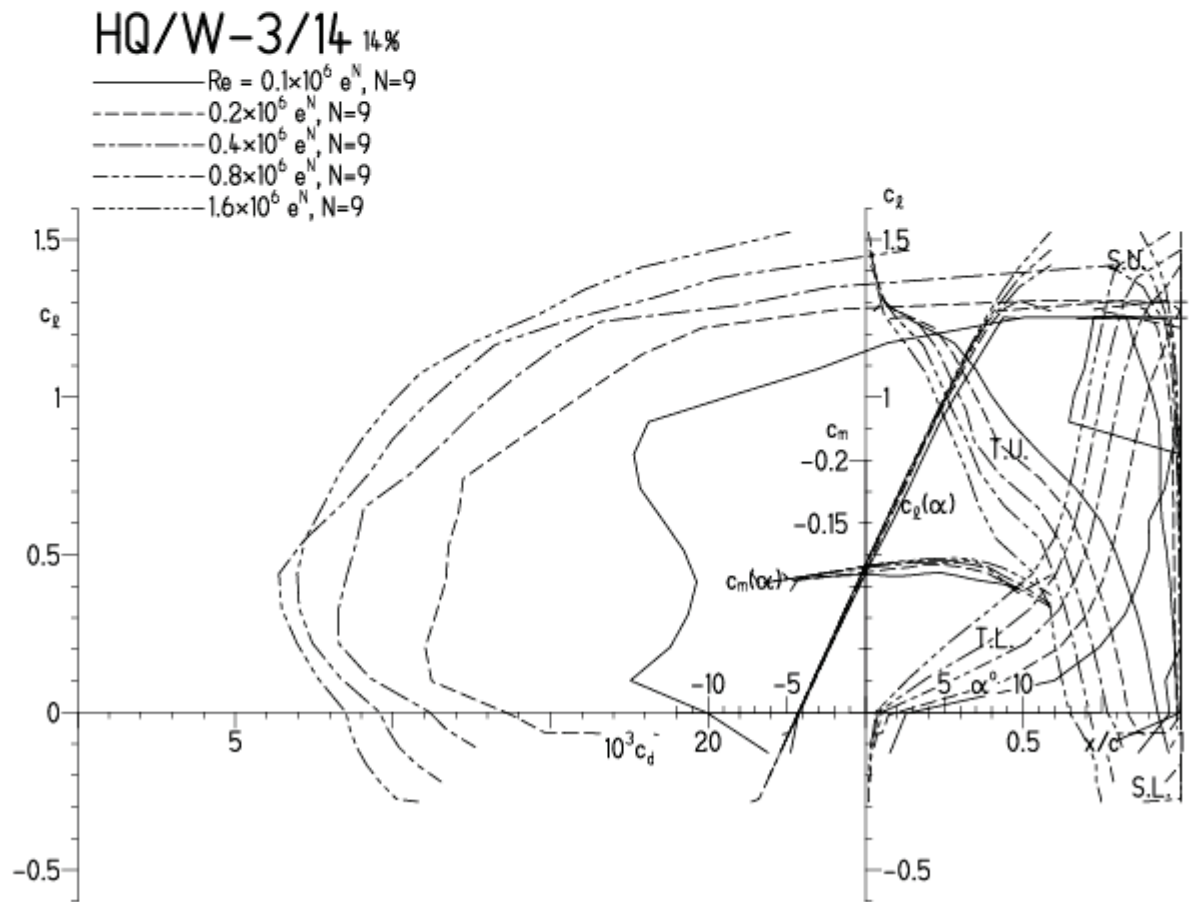
EPPLER 2005 V. 8.5.07 RUN 2.12.10 12:55



EPPLER 2005 V. 8.5.07 RUN 4.12.10 11:41

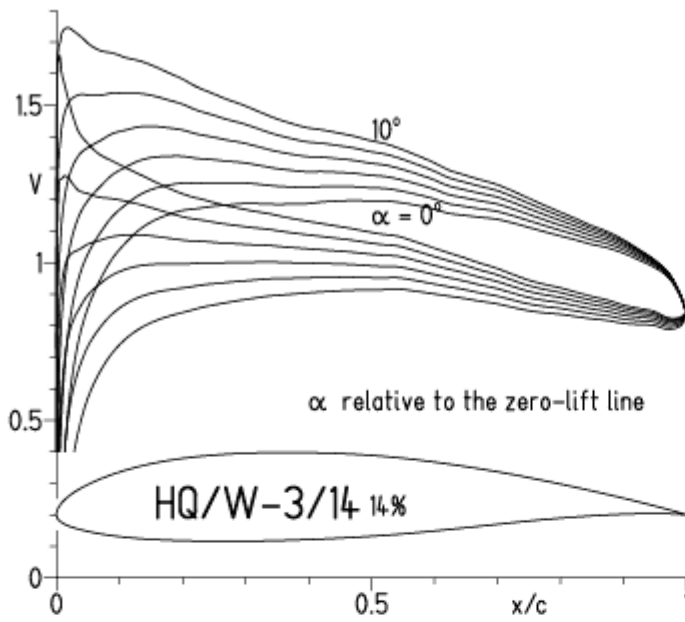


EPPLER 2005 V. 8.5



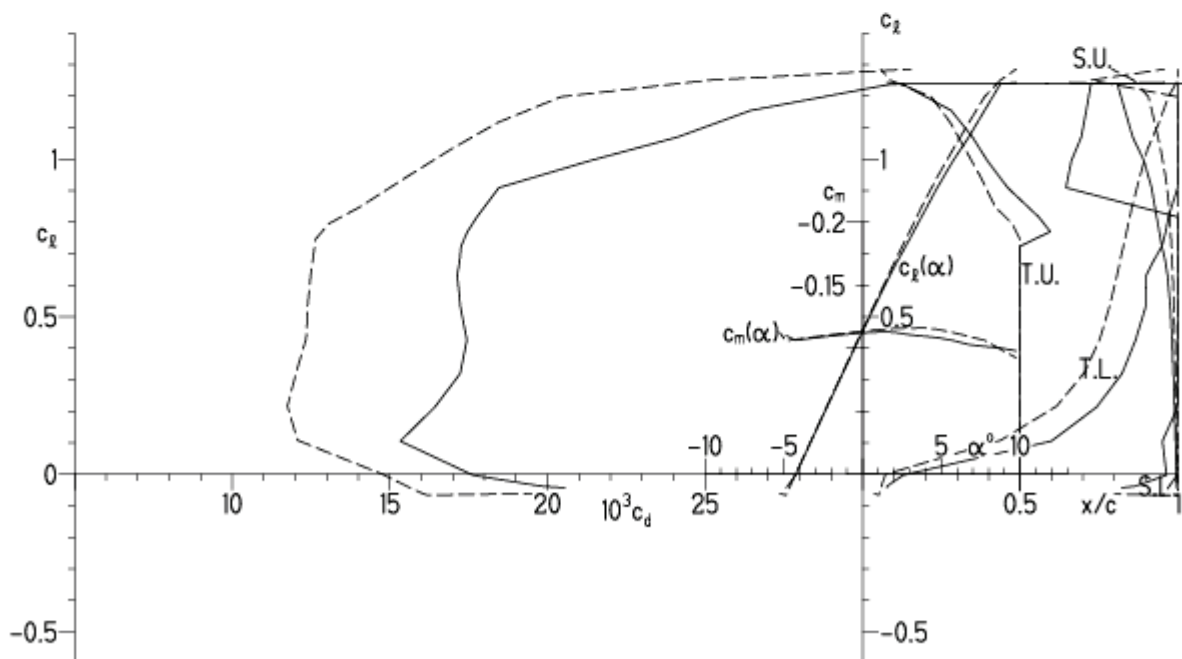
HQ/W-3/14, N=9, Turbulatoreffekt

EPPLER 2005 V. 8.5.07 RUN 2.12.10 13:20



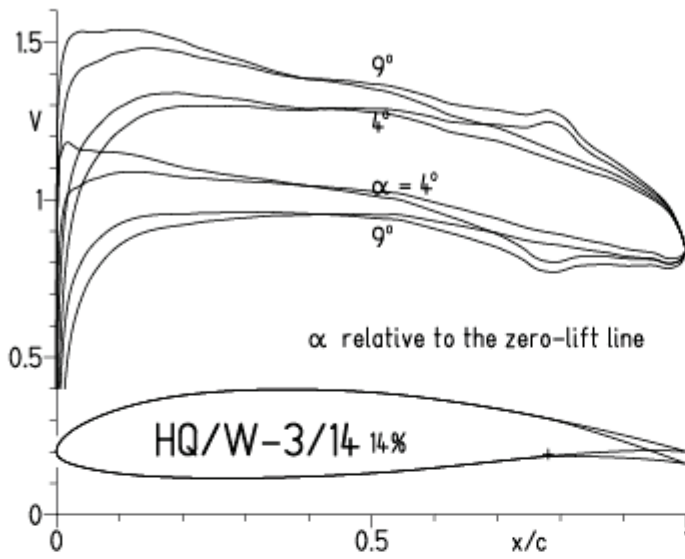
EPPLER 2005 V. 8.5.07 RUN 2.12.10 13:

HQ/W-3/14 14%

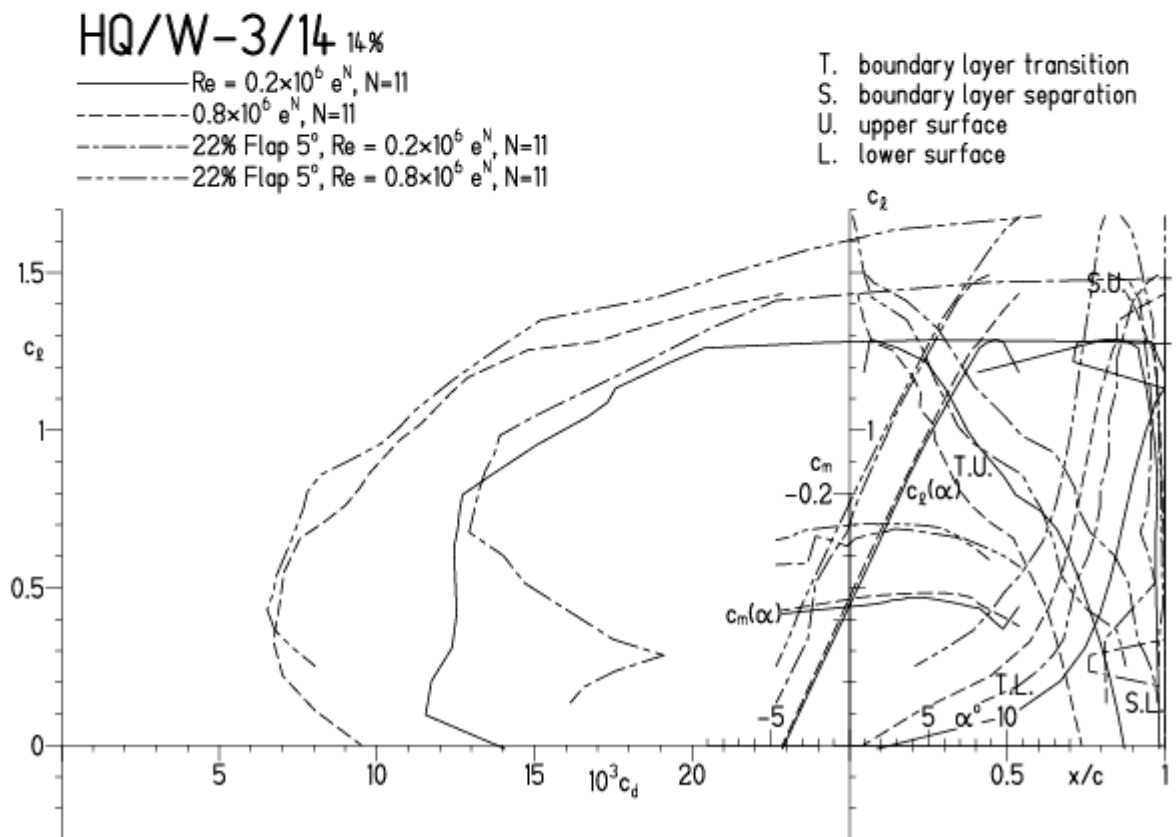
—  $Re = 0.1 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$ - - -  $0.2 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$ 

HQ/W-3/14, N=11, mit 5° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 4.12.10 12:23



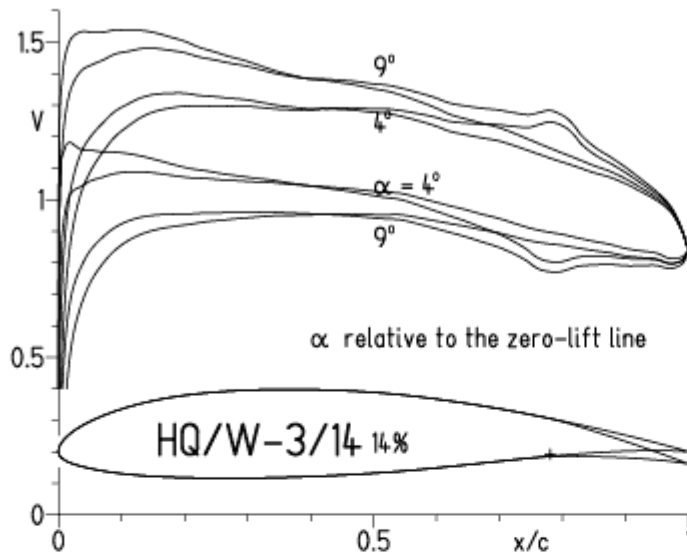
EPPLER 2005 V. 8.5.07 RUN 4.12.10 12:



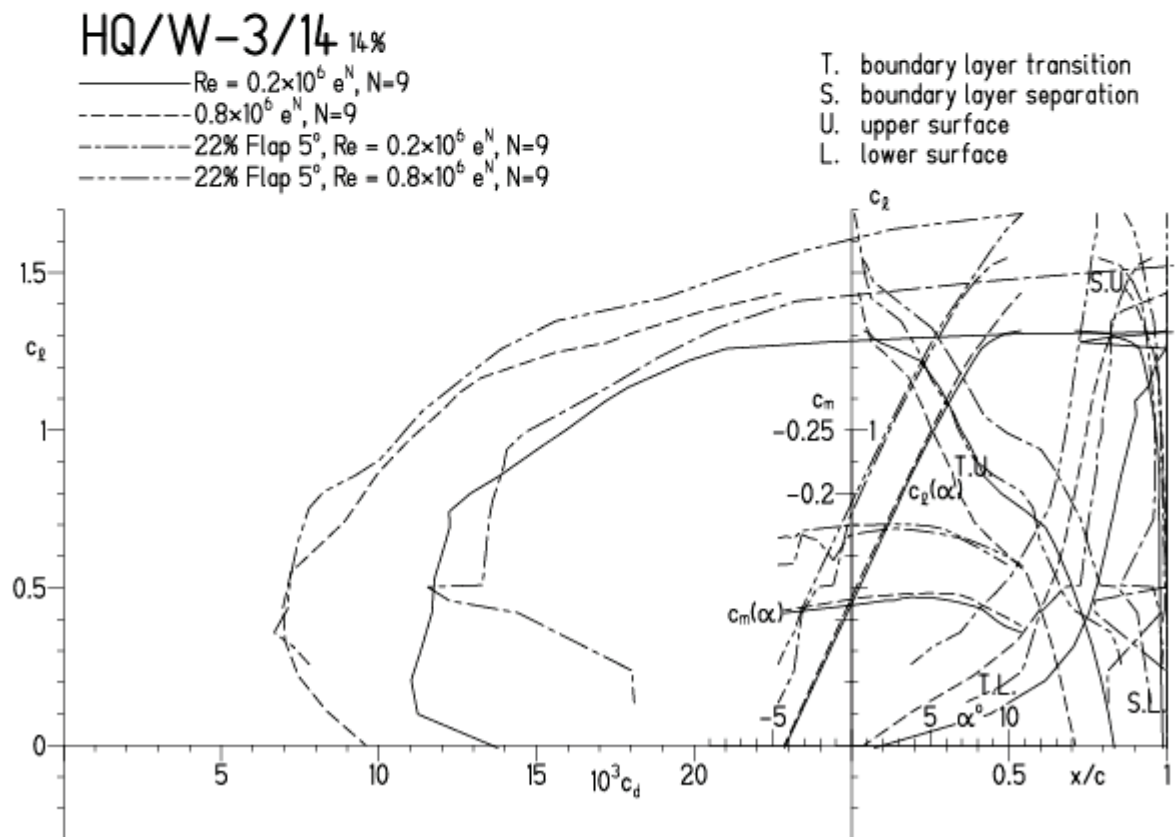
HQ/W-3/14, N=9, mit 5° Wölbklappenausschlag



EPPLER 2005 V. 8.5.07 RUN 4.12.10 12:27

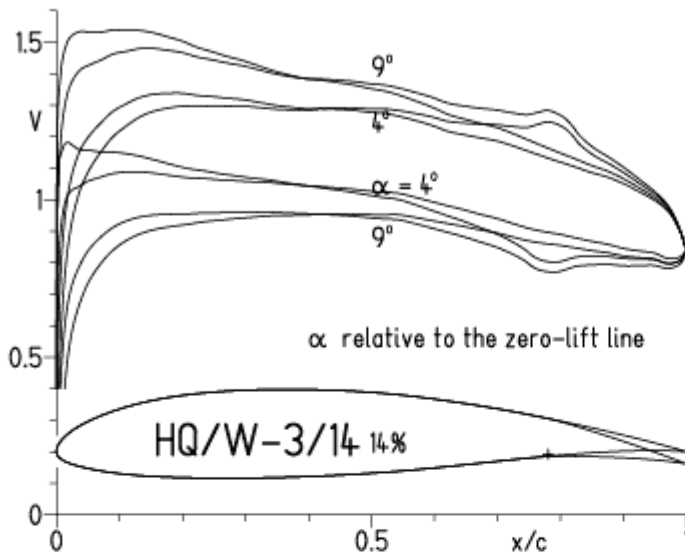


EPPLER 2005 V. 8.5



**HQ/W-3/14, N=9, mit 5° Wölbklappenausschlag, Turbulatoreffekt**  
(optimale Turbulatorposition bei 50% - 60% der Profiltiefe)

EPPLER 2005 V. 8.5.07 RUN 4.12.10 12:33

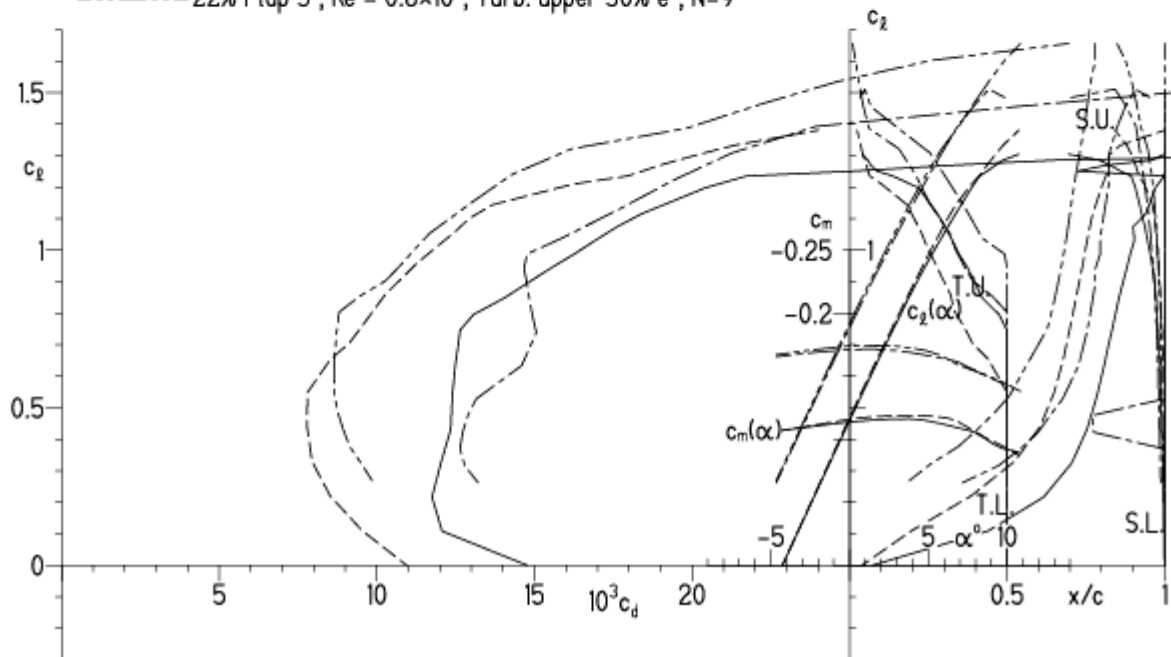


EPPLER 2005 V. 8.5.07 RUN 4.12.1

### HQ/W-3/14 14%

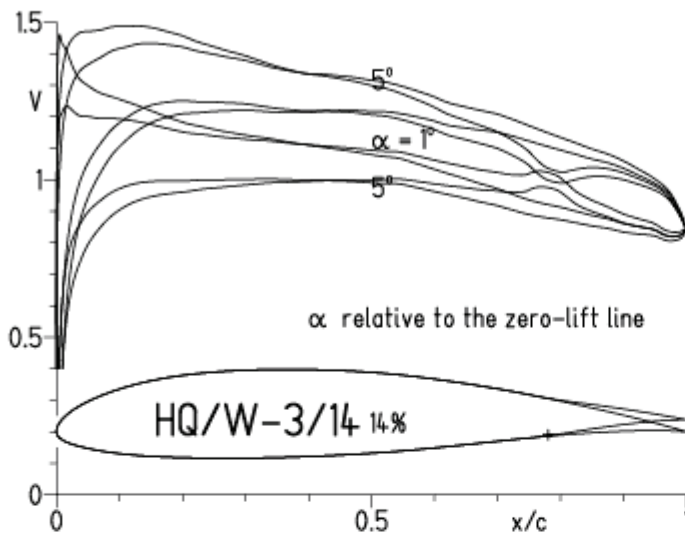
- $Re = 0.2 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$
- - -  $0.8 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$
- · - · - 22% Flap  $5^\circ$ ,  $Re = 0.2 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$
- · - · - 22% Flap  $5^\circ$ ,  $Re = 0.8 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$

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

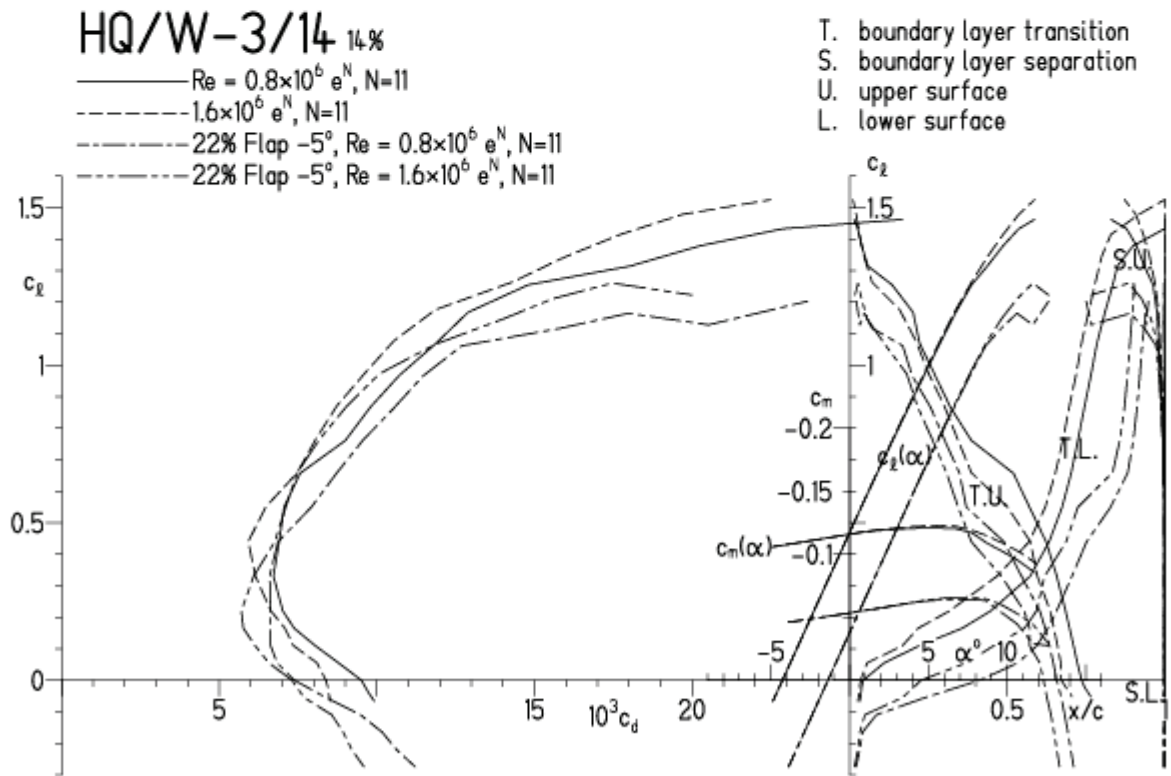


HQ/W-3/14, N=11, mit  $-5^\circ$  Wölbklappenausschlag (Schnellflug)

EPPLER 2005 V. 8.5.07 RUN 4.12.10 12:40

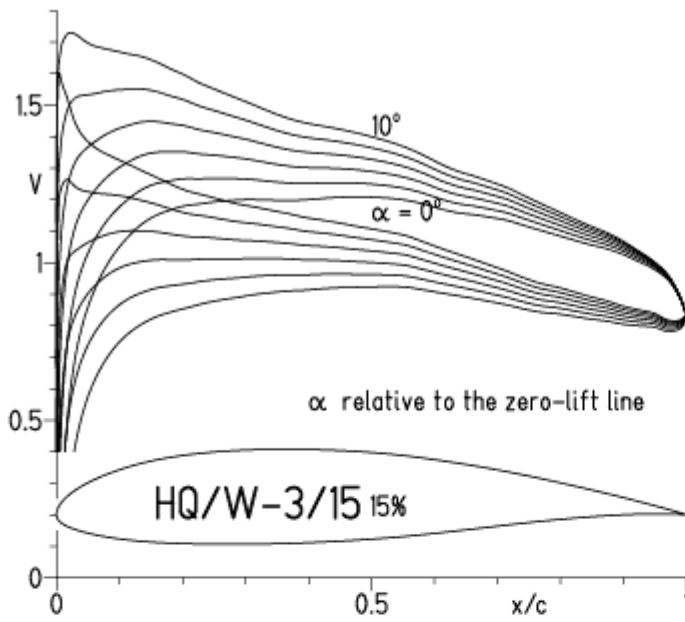


EPPLER 2005 V. 8.5.07 RUN 4.12.1

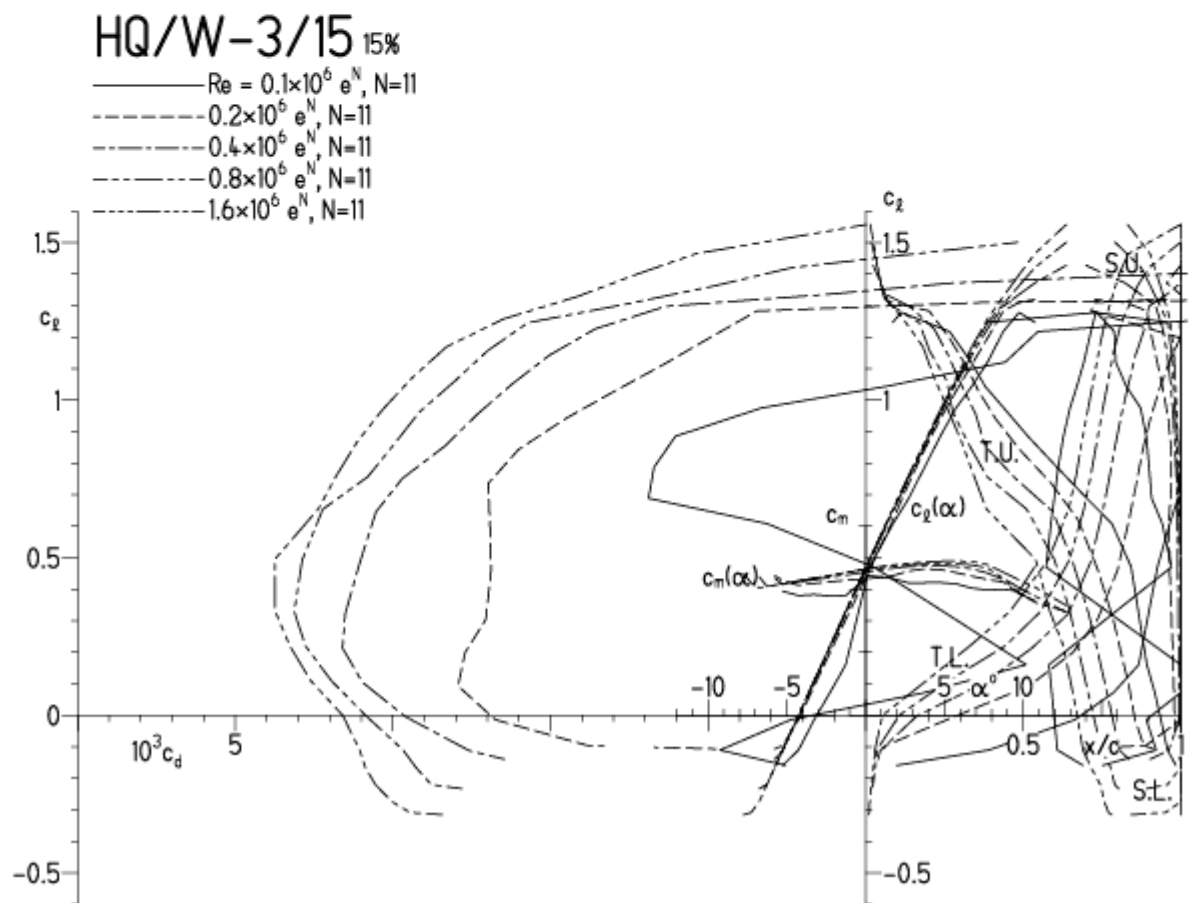


HQ/W-3/15, N=11

EPPLER 2005 V. 8.5.07 RUN 4.12.10 13:07

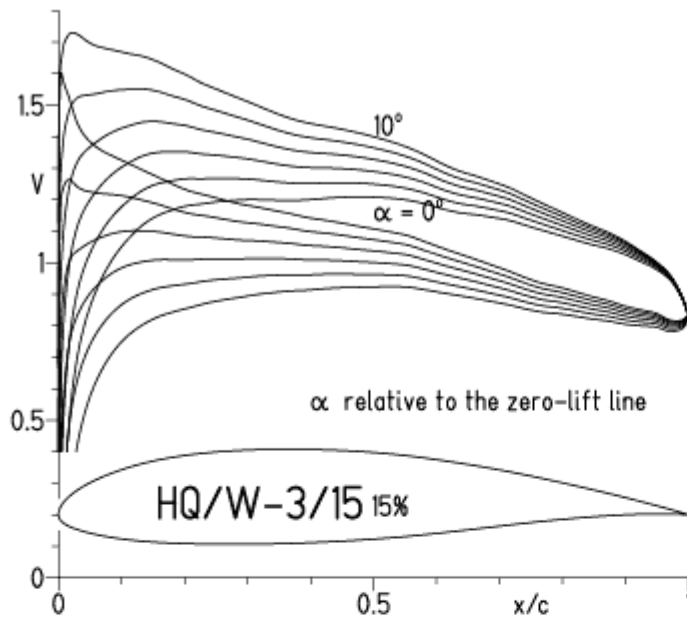


EPPLER 2005 V. 8.5.07 RUN 4.1

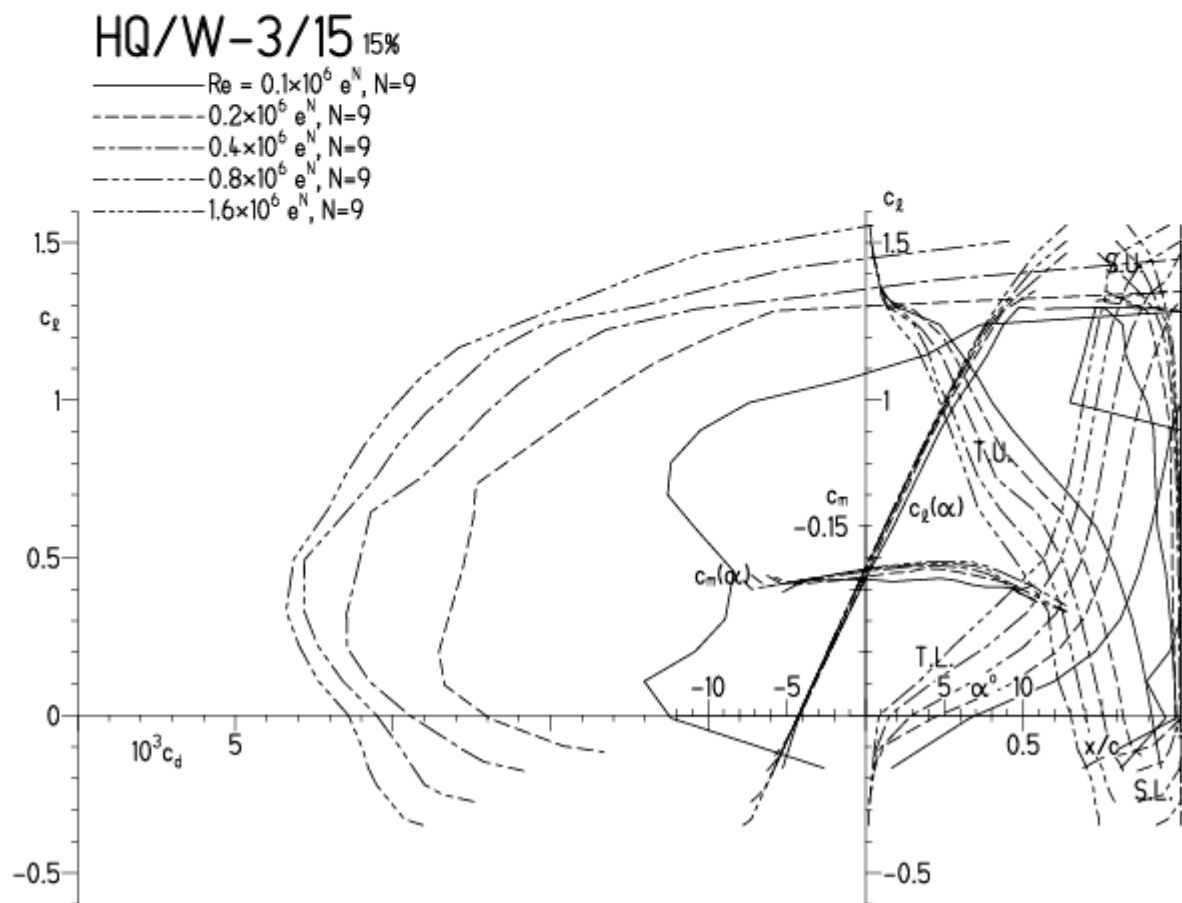


HQ/W-3/15, N=9

EPPLER 2005 V. 8.5.07 RUN 4.12.10 13:10

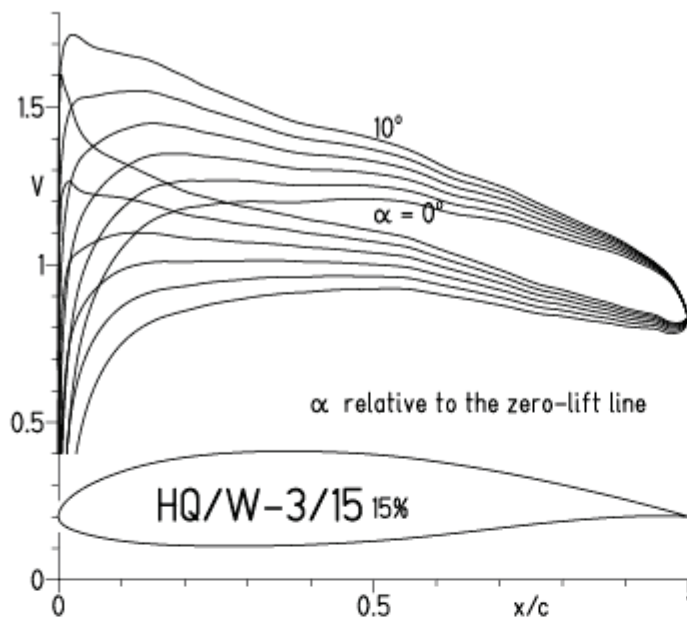


EPPLER 20



HQ/W-3/15, N=9, Turbulatoreffekt

EPPLER 2005 V. 8.5.07 RUN 4.12.10 13:27

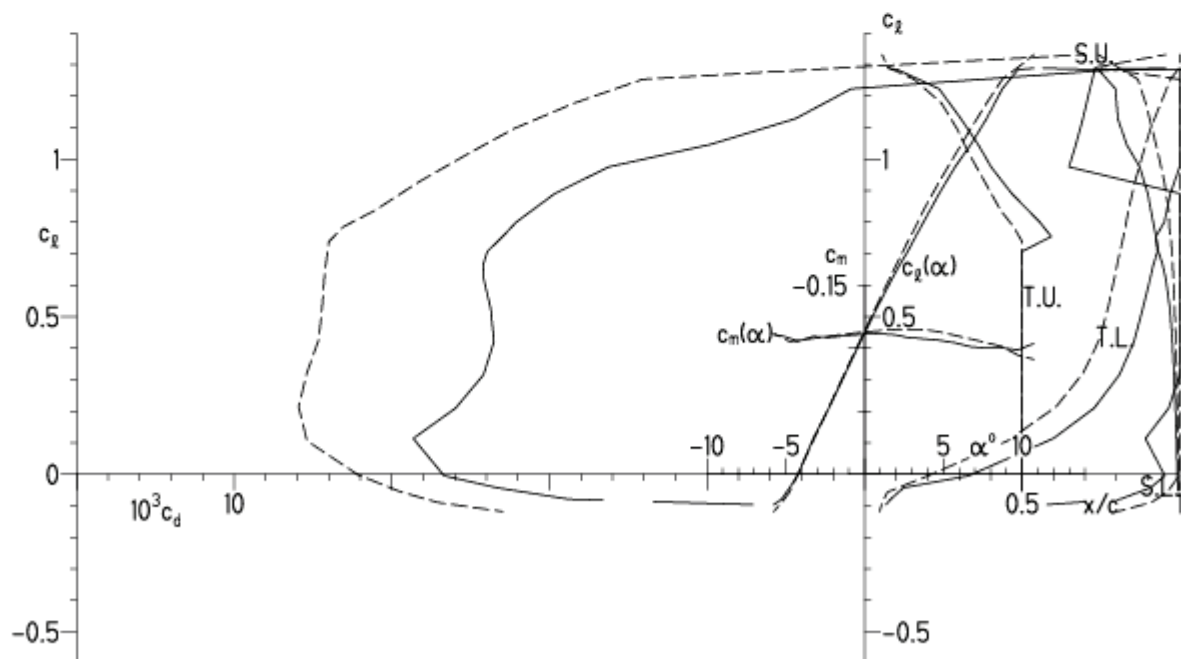


EPPLER 2005 V

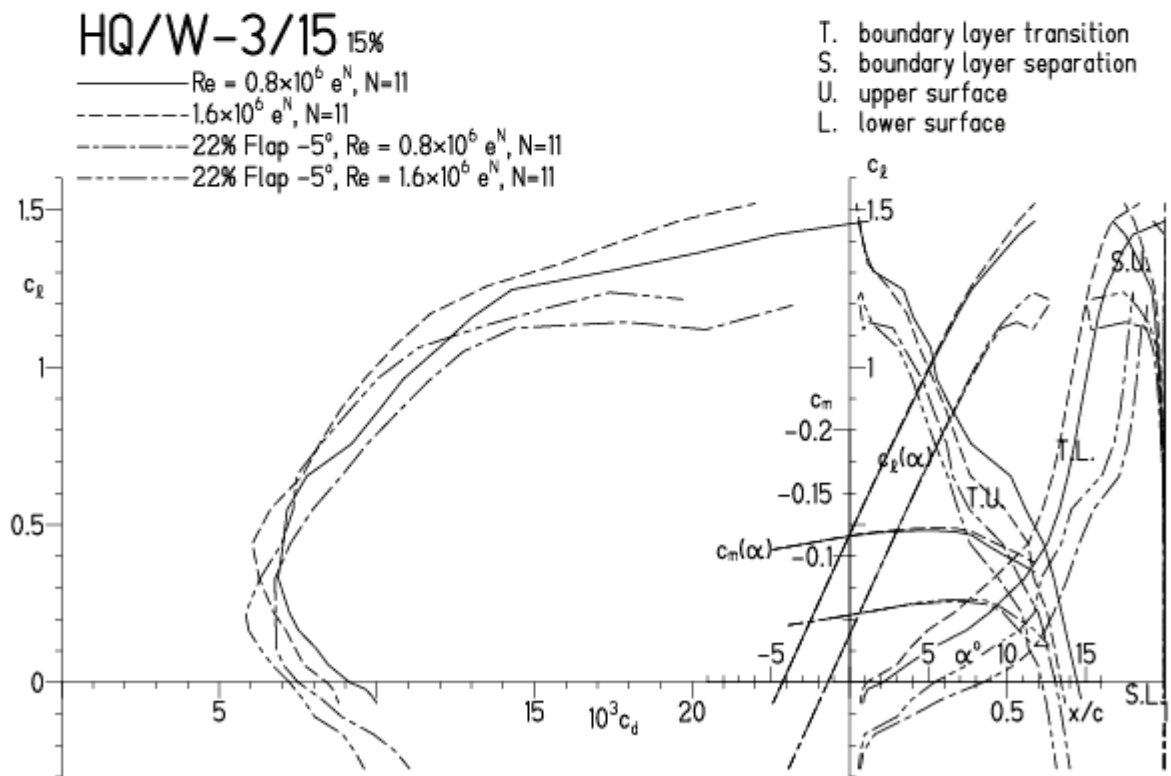
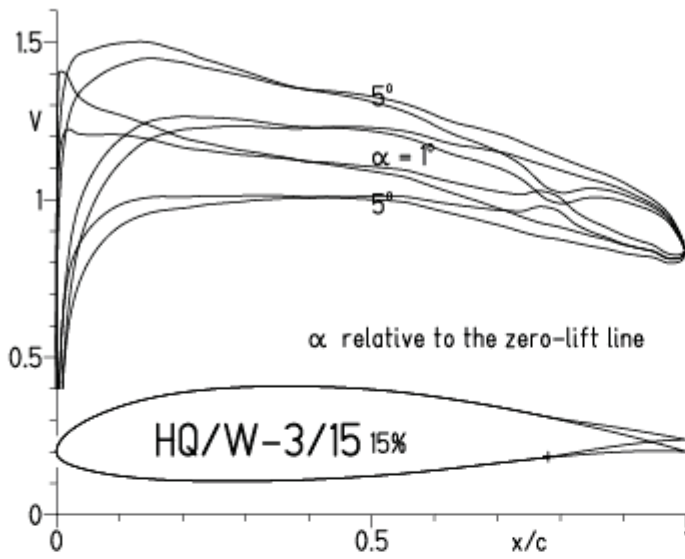
### HQ/W-3/15 15%

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

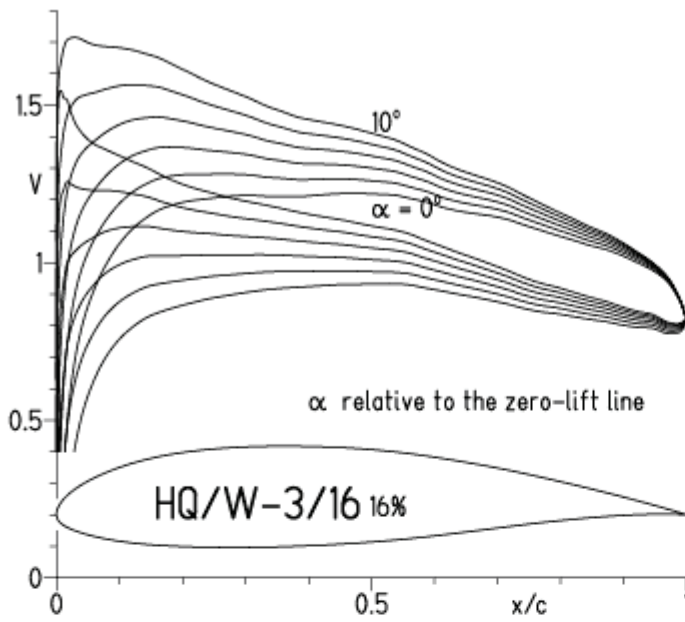
- - -  $0.2 \times 10^6$ , Turb. upper 50%  $e^N$ ,  $N=9$



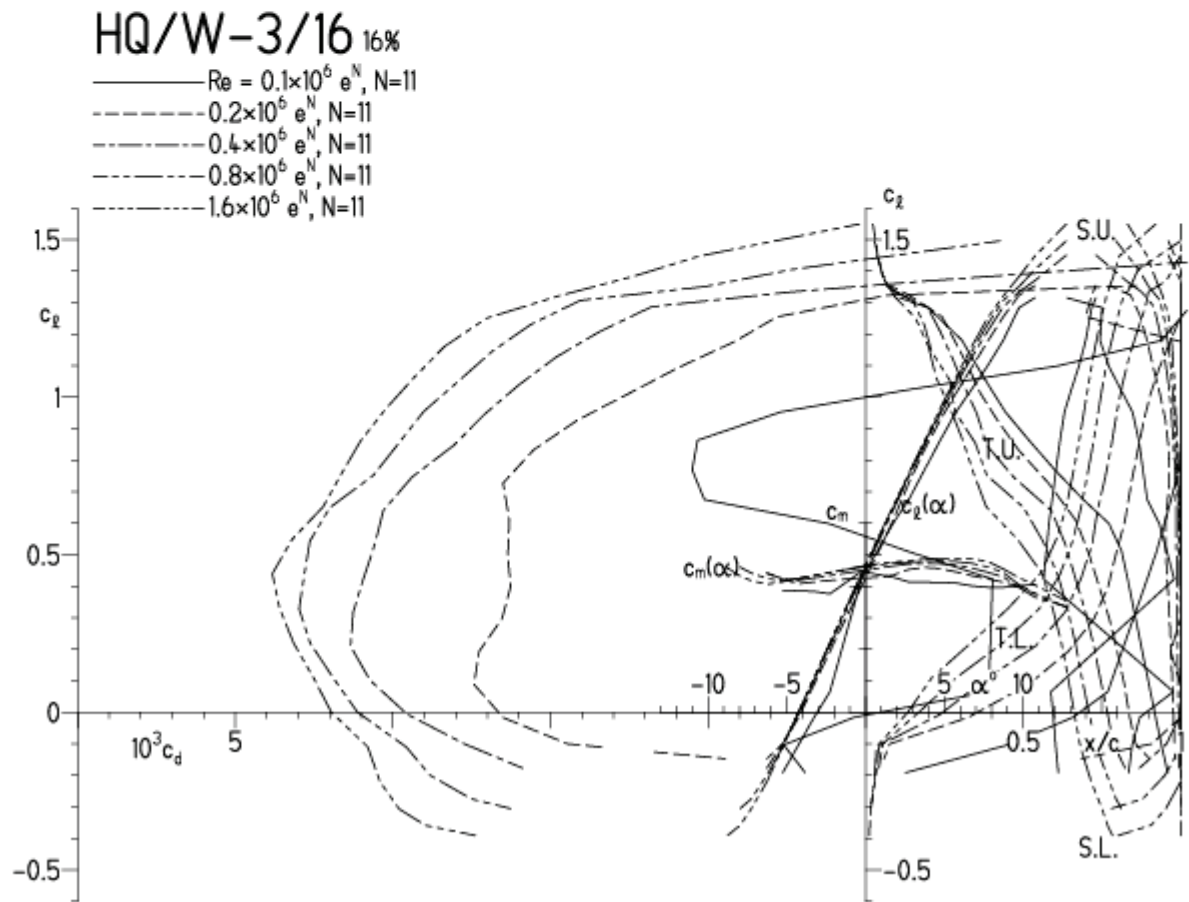
HQ/W-3/15,  $N=11$ , mit  $-5^\circ$  Wölbklappenausschlag (Schnellflug)



EPPLER 2005 V. 8.5.07 RUN 5.12.10 11:50



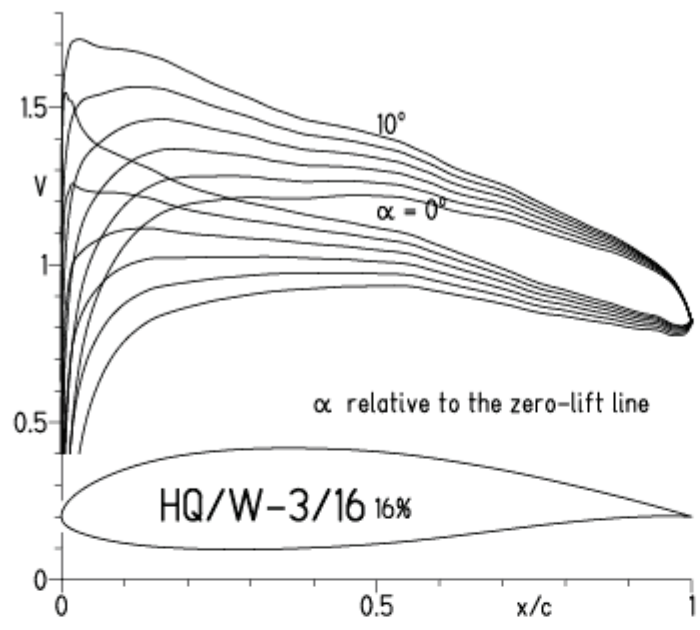
EPPLER 2005 V. 8.5.07 RUN 5.12.10 11:50



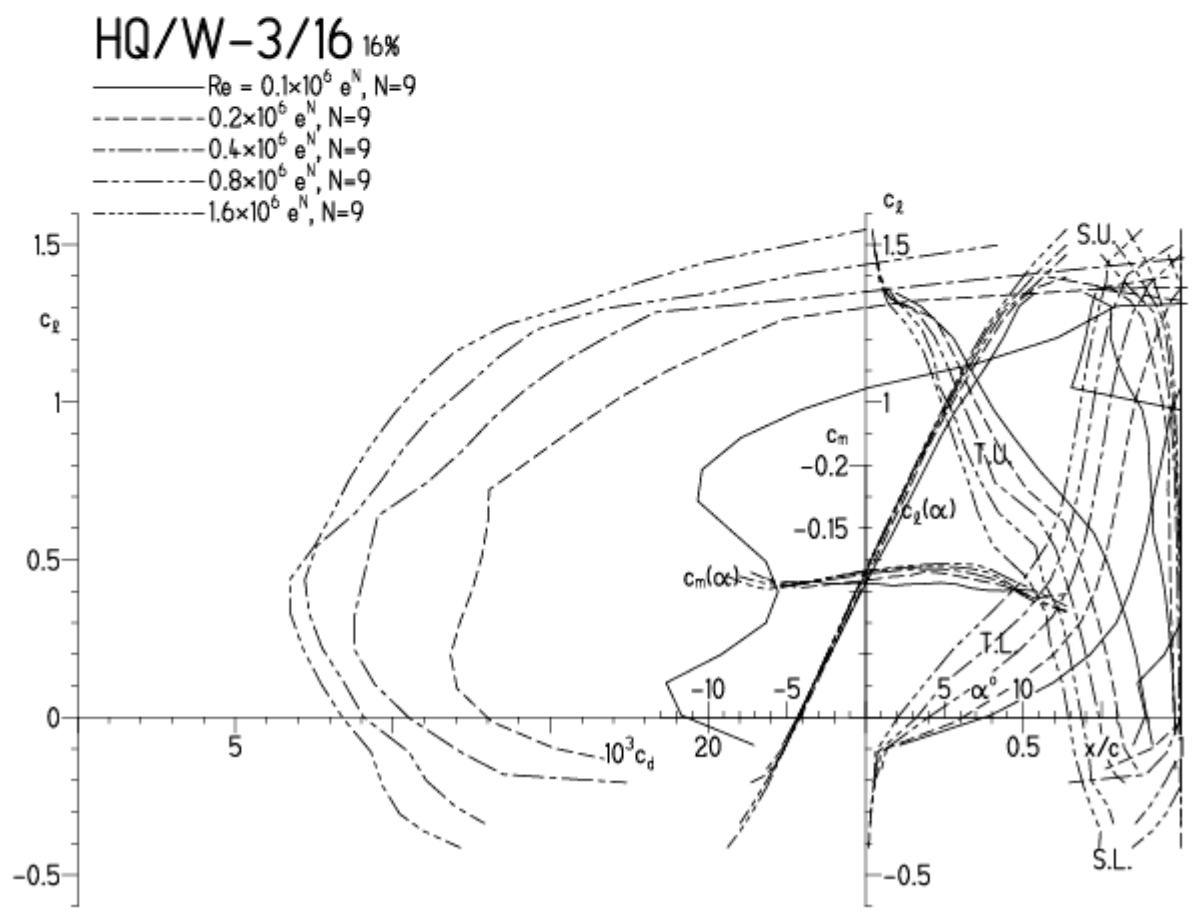
HQ/W-3/16, N=9



EPPLER 2005 V. 8.5.07 RUN 5.12.10 11:53

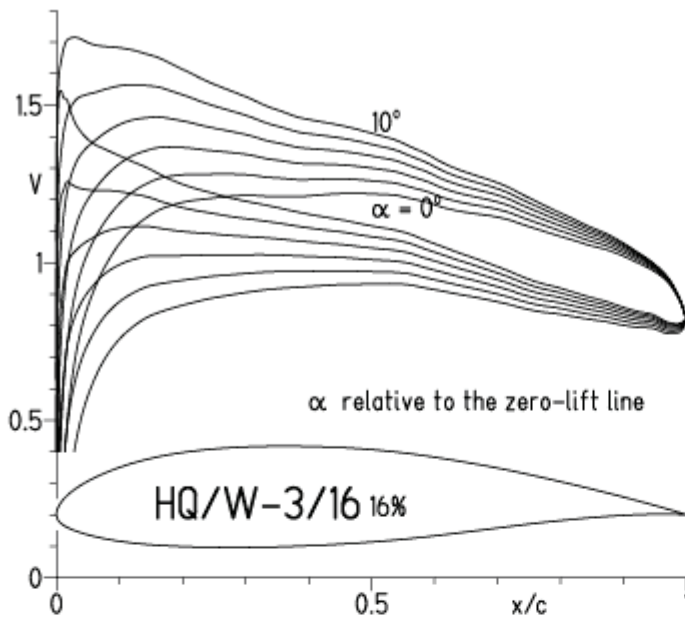


EPPLER 2005 V. 8.5.07 RUN 5.12.10 11:53



HQ/W-3/16,  $N=9$ , Turbulatoreffekt

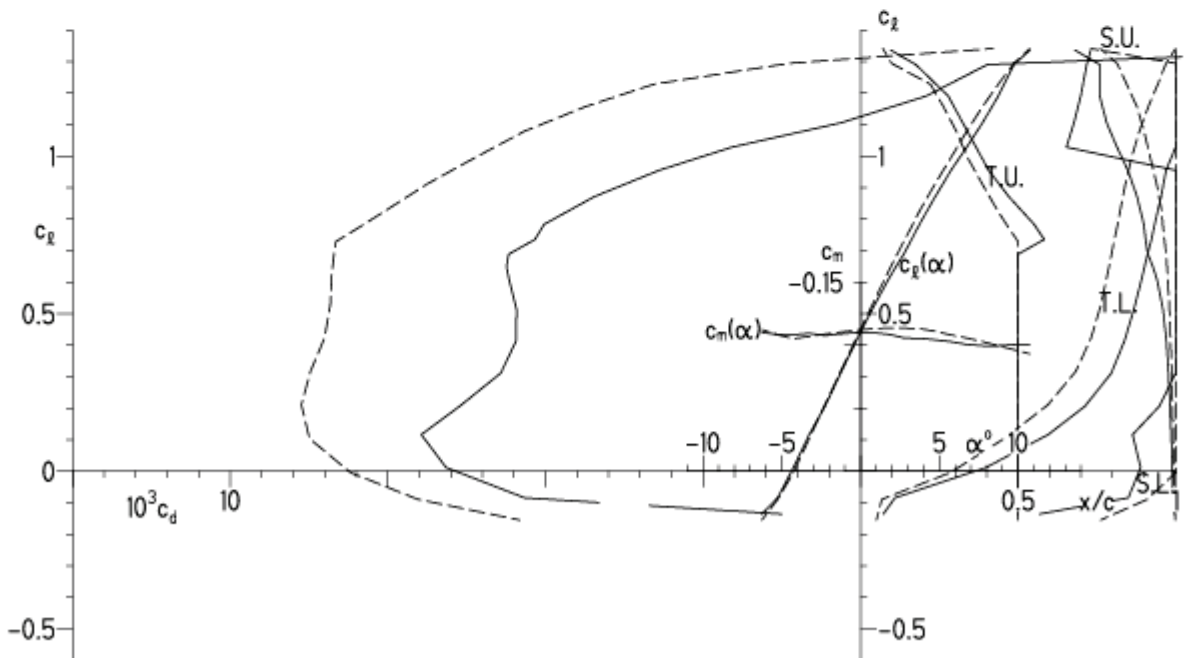
EPPLER 2005 V. 8.5.07 RUN 5.12.10 12:01



EPPLER 200

### HQ/W-3/16 16%

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



HQ/W-3/16,  $N=11$ , mit  $-5^\circ$  Wölbklappenausschlag (Schnellflug)

