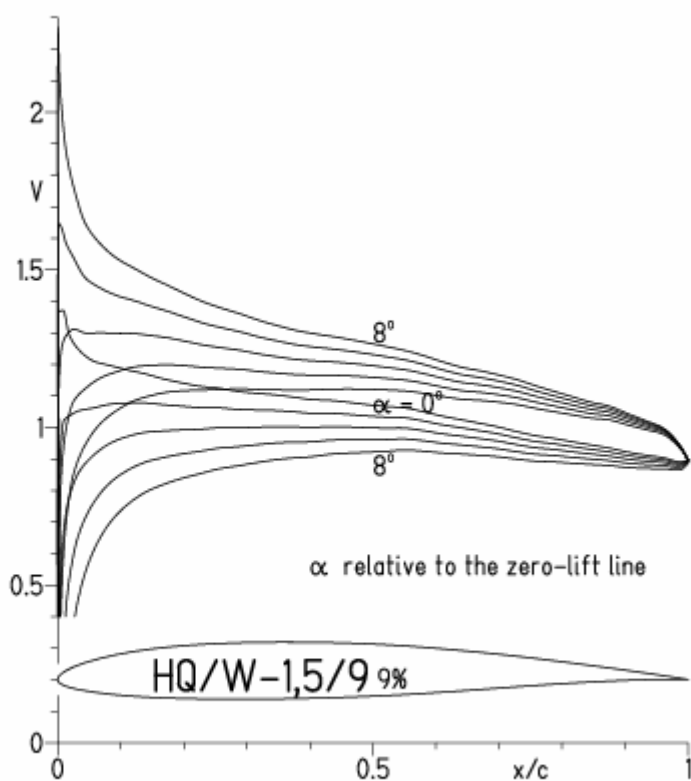


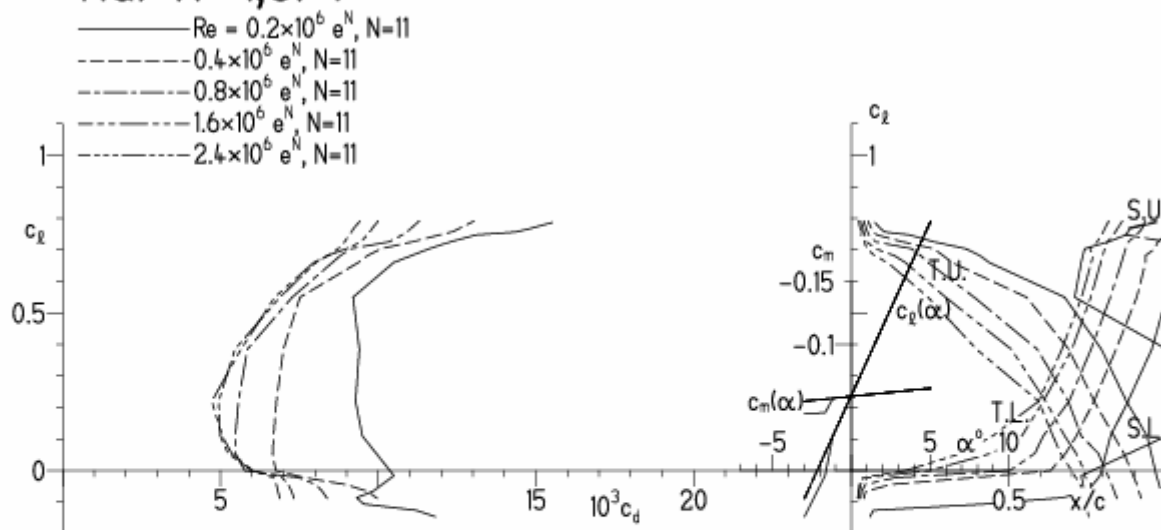
# HQ/W-1,5/9-Polaren, N=11

EPPLER 2005 V. 8.5.07 RUN 5.11.10 10:43



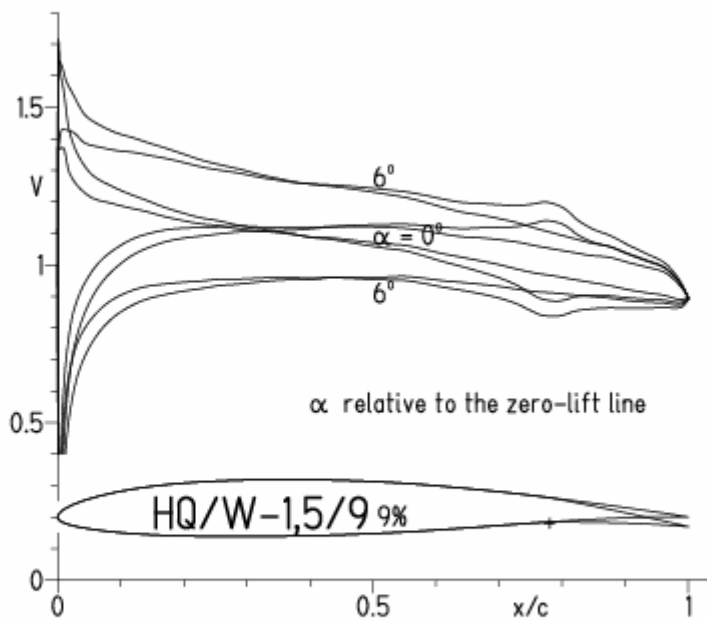
EPPLER 2005 V. 8.5.07

## HQ/W-1,5/9 9%



# HQ/W-1,5/9-Polaren, N=11, mit 4° Wölbklappenausschlag, niedrige Re-Zahl

EPPLER 2005 V. 8.5.07 RUN 5.11.10 10:30

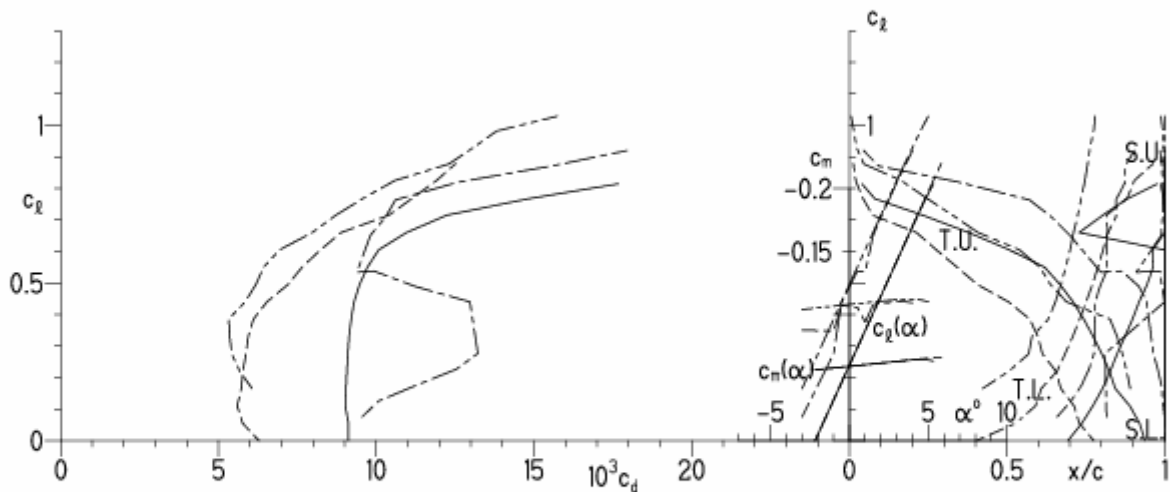


EPPLER 20

## HQ/W-1,5/9 9%

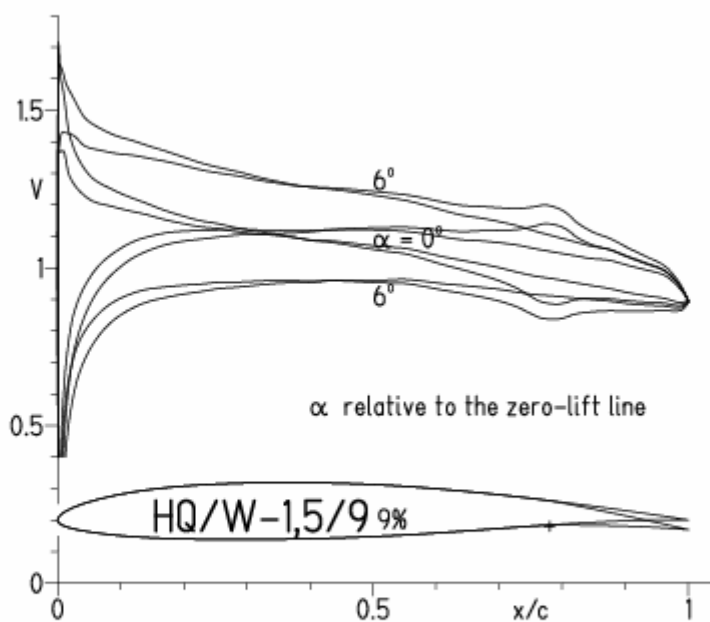
- $Re = 0.2 \times 10^6$  e<sup>N</sup>, N=9
- - -  $0.8 \times 10^6$  e<sup>N</sup>, N=9
- · -  $0.2 \times 10^6$  e<sup>N</sup>, N=9
- - - **22% Flap 4°**,  $Re = 0.8 \times 10^6$  e<sup>N</sup>, N=9

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



# HQ/W-1,5/9-Polaren, N=11, mit 4° Wölbklappenausschlag, hohe Re-Zahl

EPPLER 2005 V. 8.5.07 RUN 5.11.10 10:26

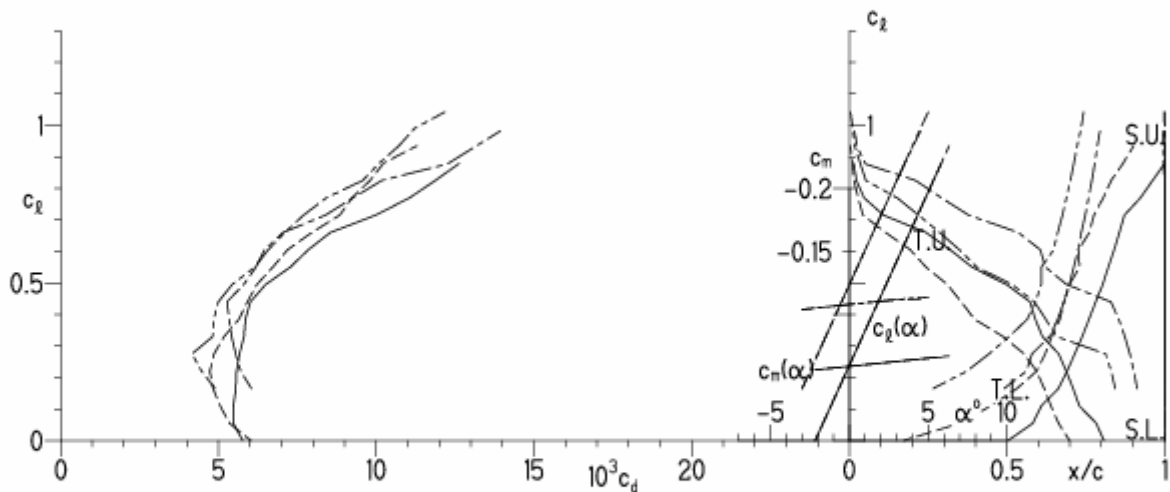


EPPLER 2005 V. 8.5.07 RUN 5.11.10 10:26

## HQ/W-1,5/9 9%

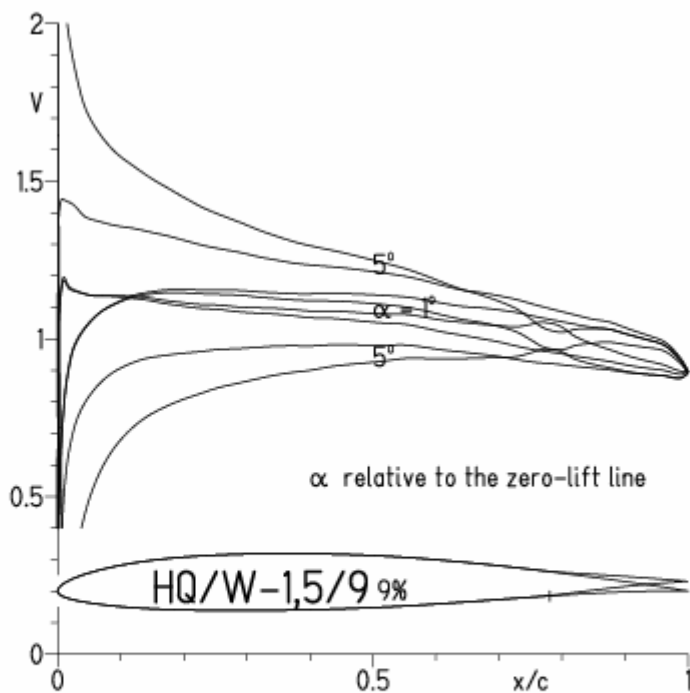
- $Re = 0.8 \times 10^6$  e<sup>N</sup>, N=11
- - -  $2.4 \times 10^6$  e<sup>N</sup>, N=11
- · -  $0.8 \times 10^6$  e<sup>N</sup>, N=11
- - - **22% Flap 4°**,  $Re = 2.4 \times 10^6$  e<sup>N</sup>, N=11

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

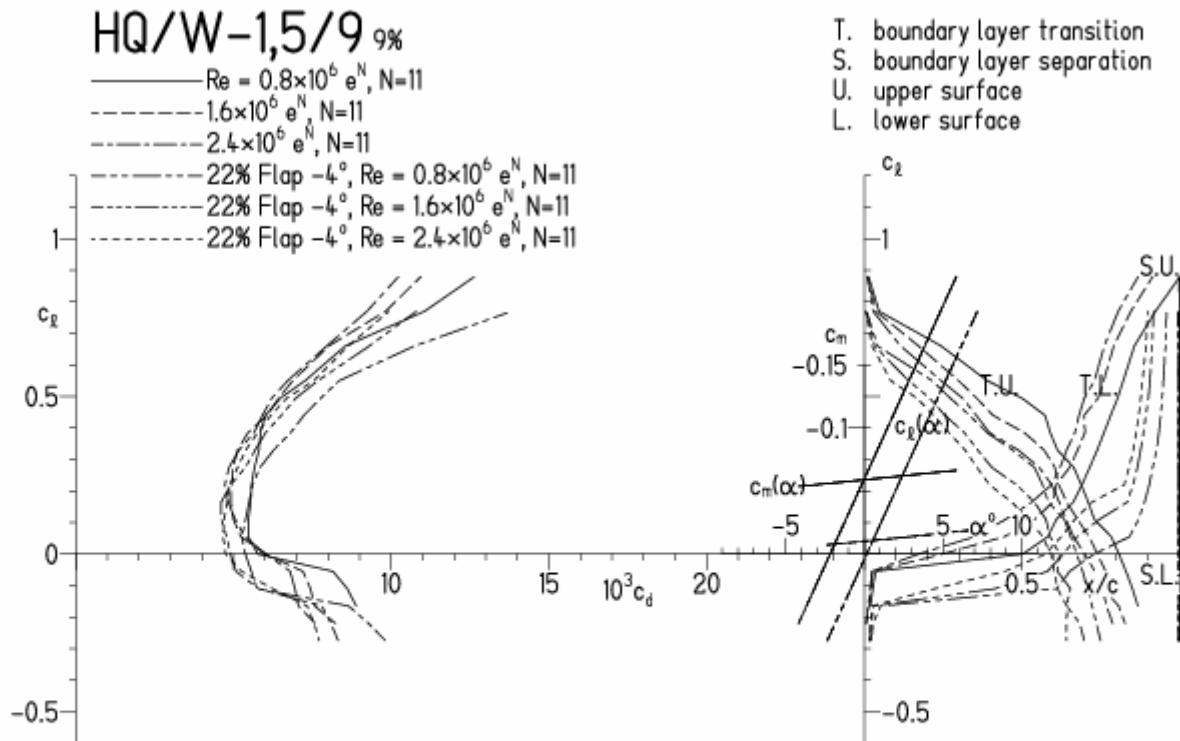


# HQ/W-1,5/9-Polaren, N=11, mit -4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 5.11.10 10:37

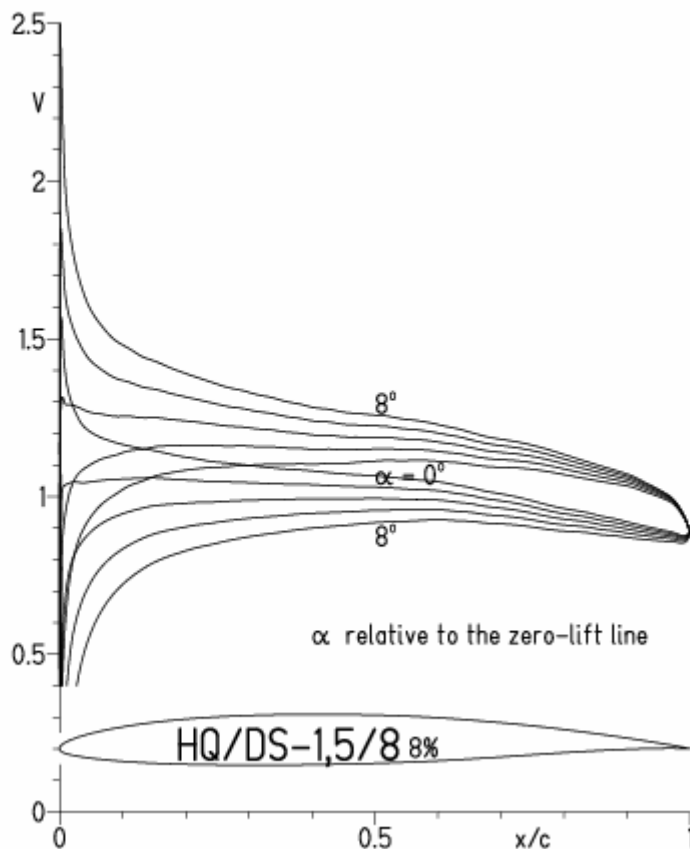


EPPLER 2005 V. 8.5.07 RUN 5.11.10 10:37



# HQ/DS-1,5/8-Polaren, N=11

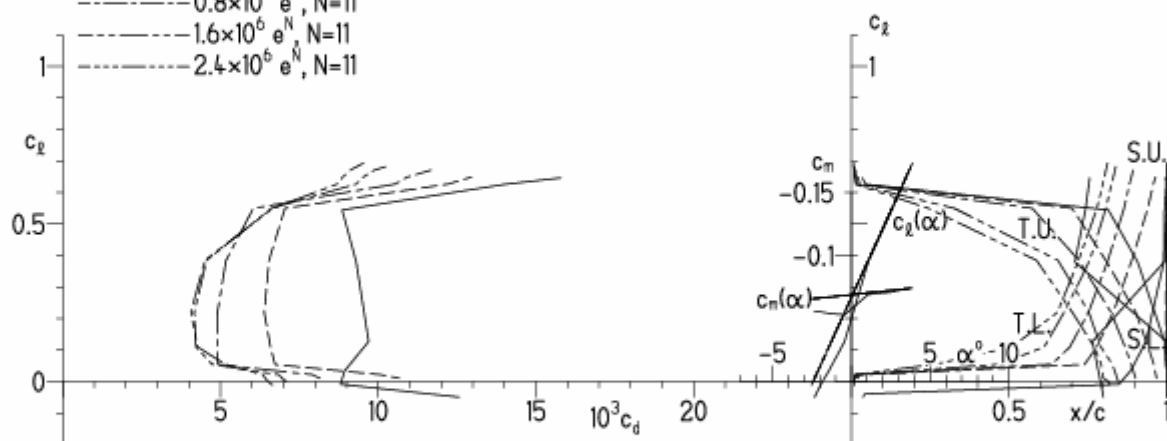
EPPLER 2005 V. 8.5.07 RUN 14.5.10 17:31



EPPLER 2005 V. 8.5.07 RUN 14.5.10 17:31

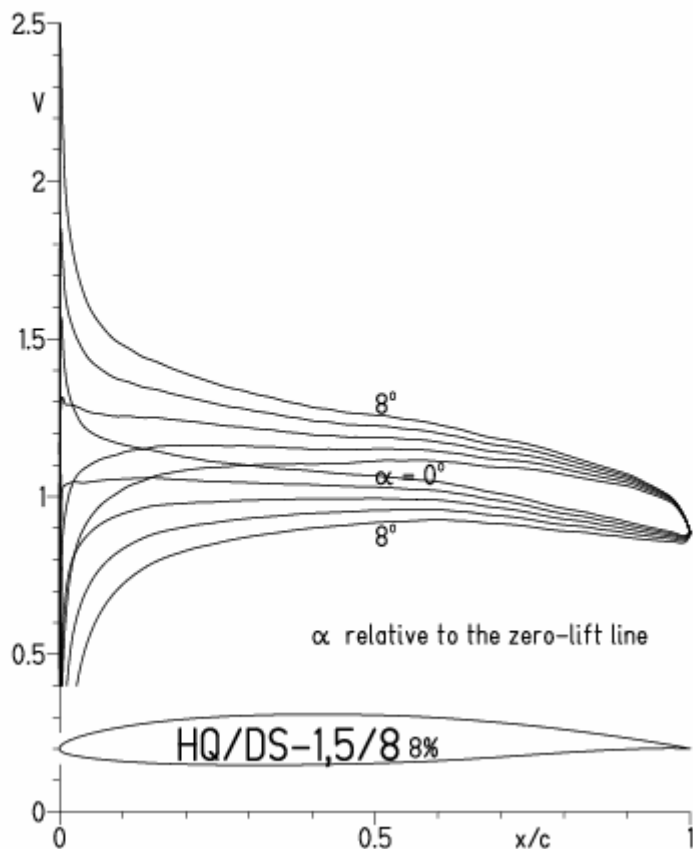
## HQ/DS-1,5/8 8%

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



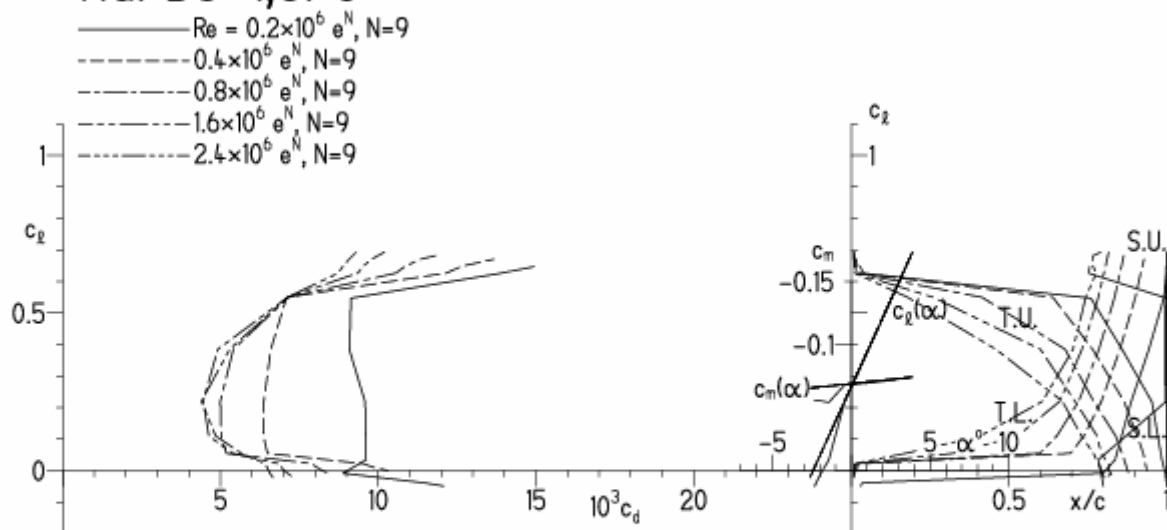
# HQ/DS-1,5/8-Polaren, N=9

EPPLER 2005 V. 8.5.07 RUN 14.5.10 17:33



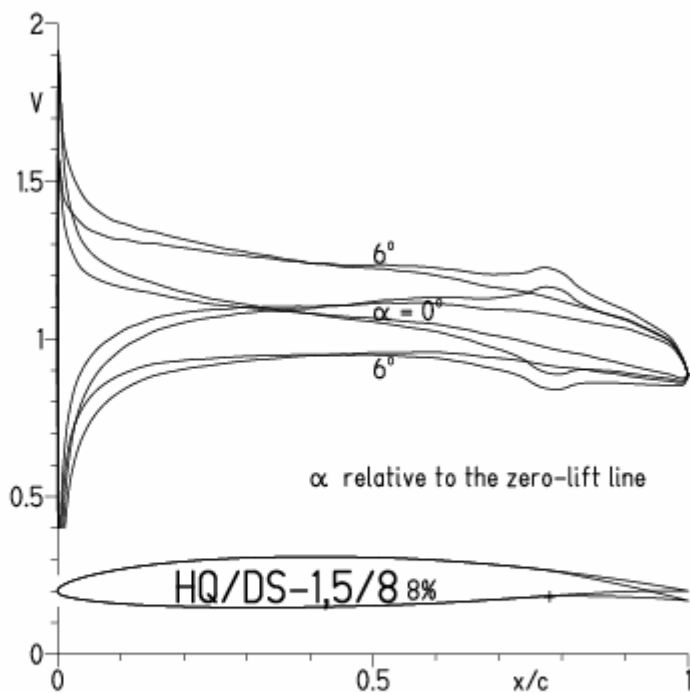
EPPLER 2005 V. 8.5.07 RUN 14.5.10 17:33

## HQ/DS-1,5/8 8%



# HQ/DS-1,5/8-Polaren, N=11, mit 4° Wölbklappenausschlag

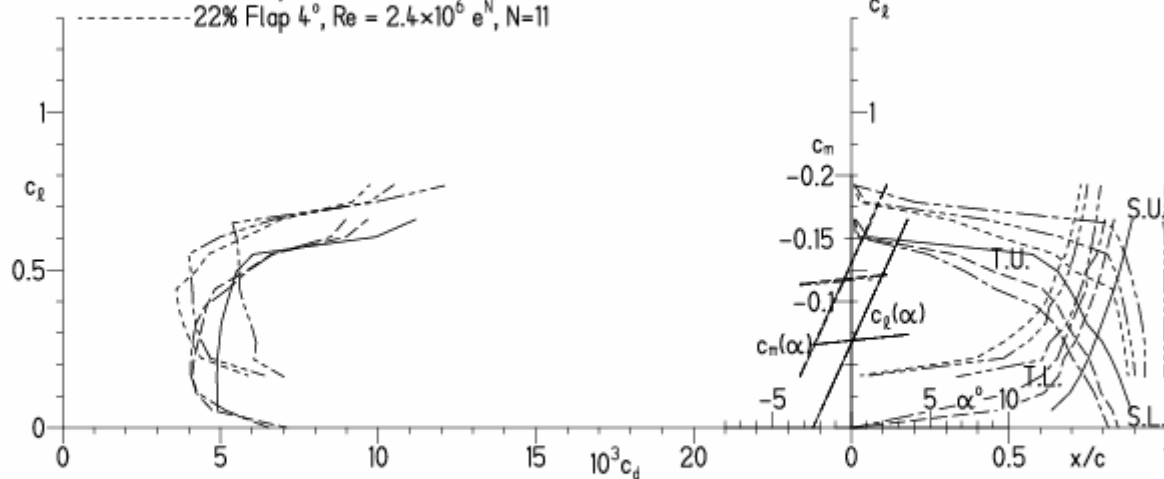
EPPLER 2005 V. 8.5.07 RUN 14.5.10 19:19



EPPLER 2005 V. 8.5.07

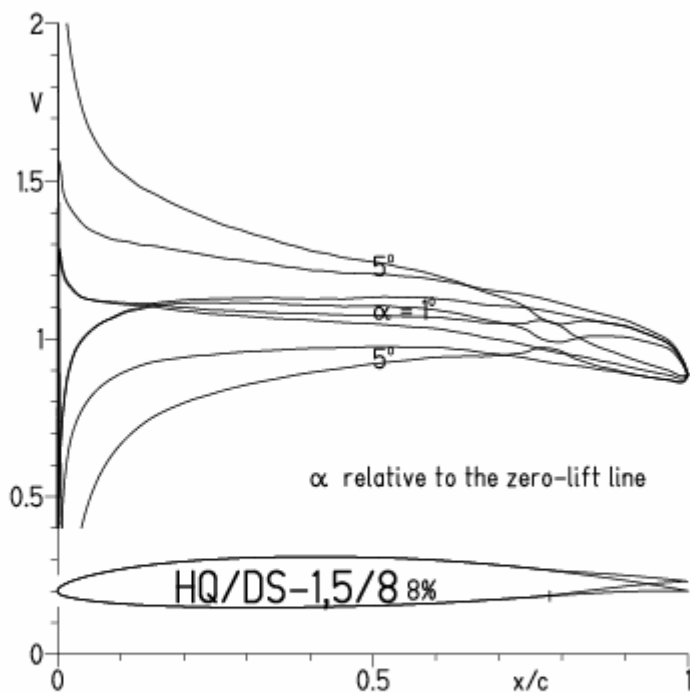
## HQ/DS-1,5/8 8%

- $Re = 0.8 \times 10^6$  e<sup>N</sup>, N=11
- - -  $1.6 \times 10^6$  e<sup>N</sup>, N=11
- - -  $2.4 \times 10^6$  e<sup>N</sup>, N=11
- - - 22% Flap 4°,  $Re = 0.8 \times 10^6$  e<sup>N</sup>, N=11
- - - 22% Flap 4°,  $Re = 1.6 \times 10^6$  e<sup>N</sup>, N=11
- - - 22% Flap 4°,  $Re = 2.4 \times 10^6$  e<sup>N</sup>, N=11

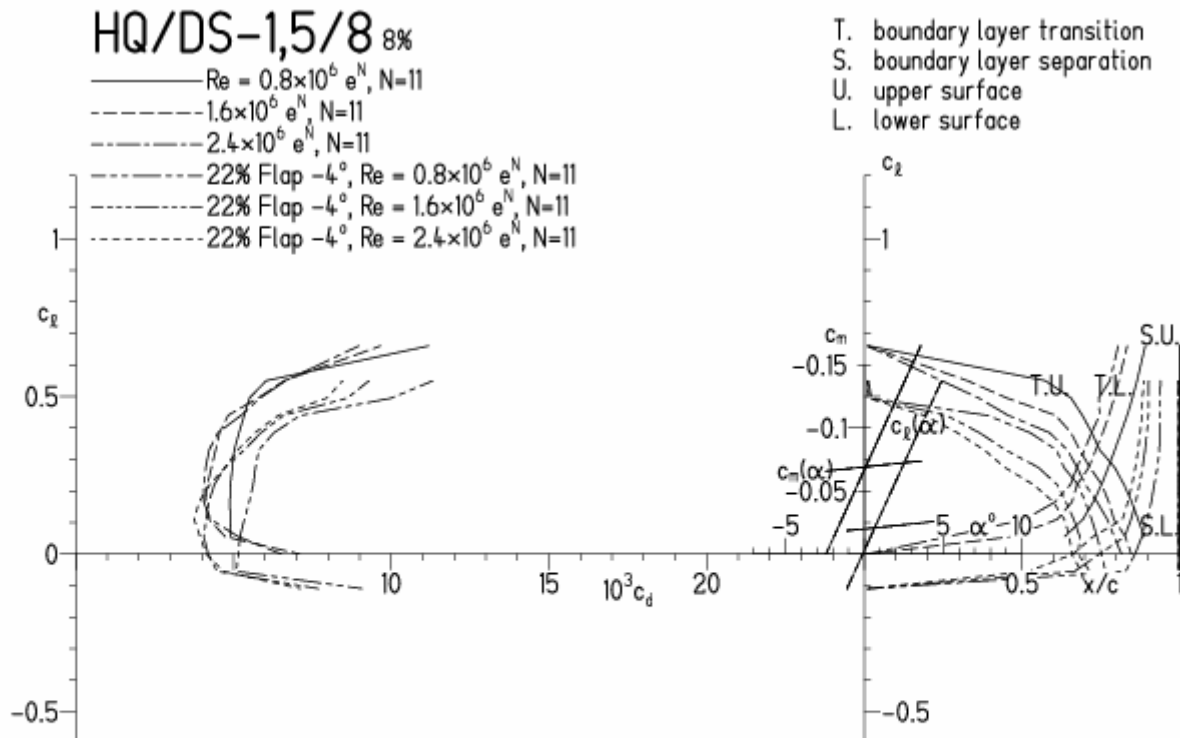


# HQ/DS-1,5/8-Polaren, N=11, mit $-4^\circ$ Wöbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 14.5.10 18:25



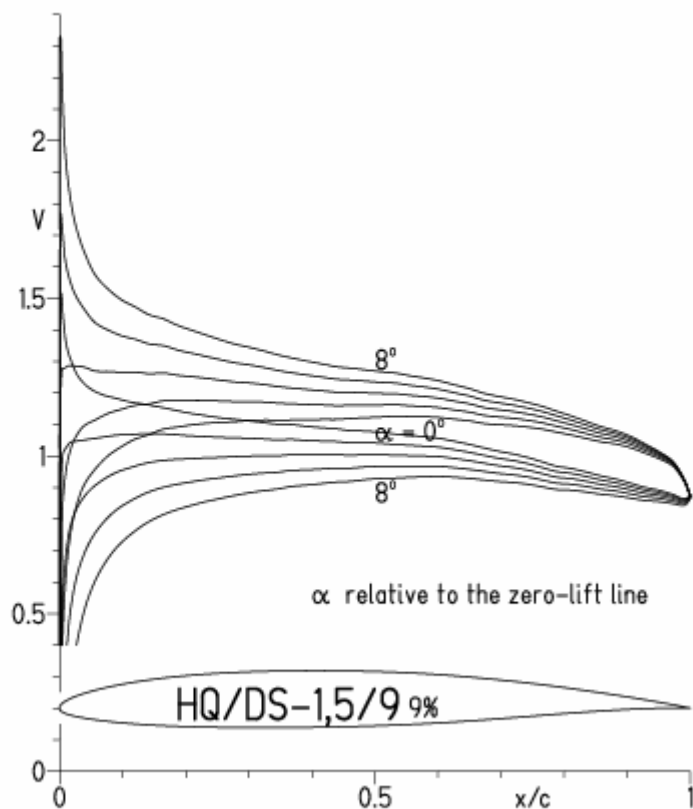
EPPLER 2005 V. 8.5





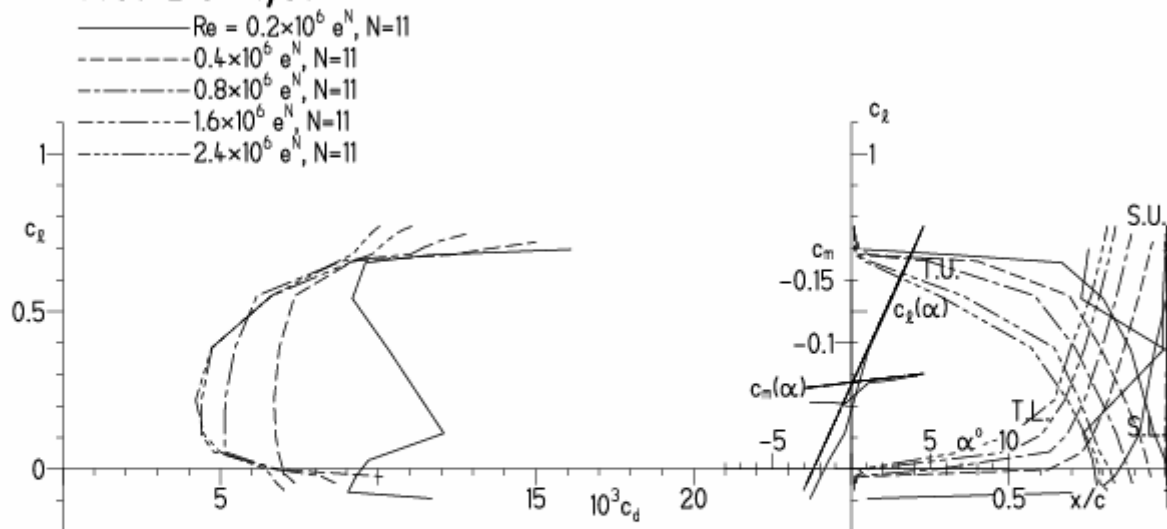
# HQ/DS-1,5/9-Polaren, N=11

EPPLER 2005 V. 8.5.07 RUN 14.5.10 17:15



EPPLER 20

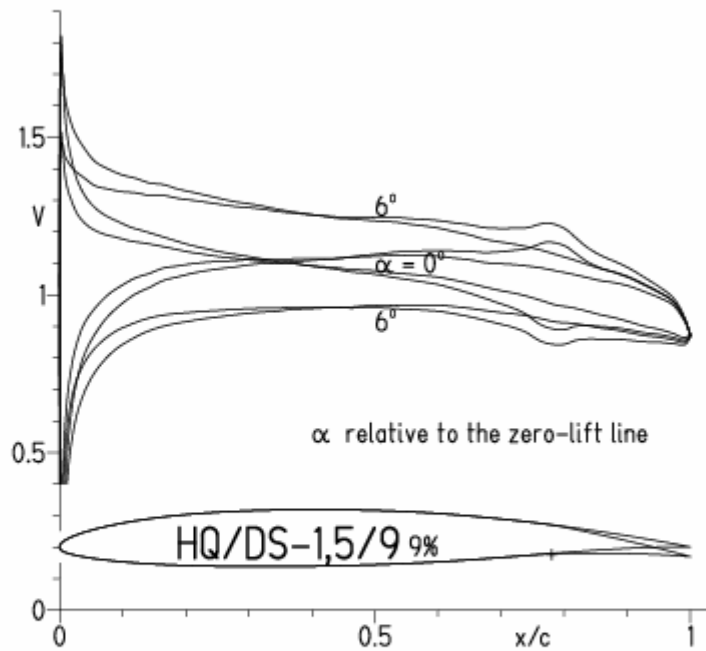
## HQ/DS-1,5/9 9%





# HQ/DS-1,5/9-Polaren, N=11, mit 4° Wölbklappenausschlag

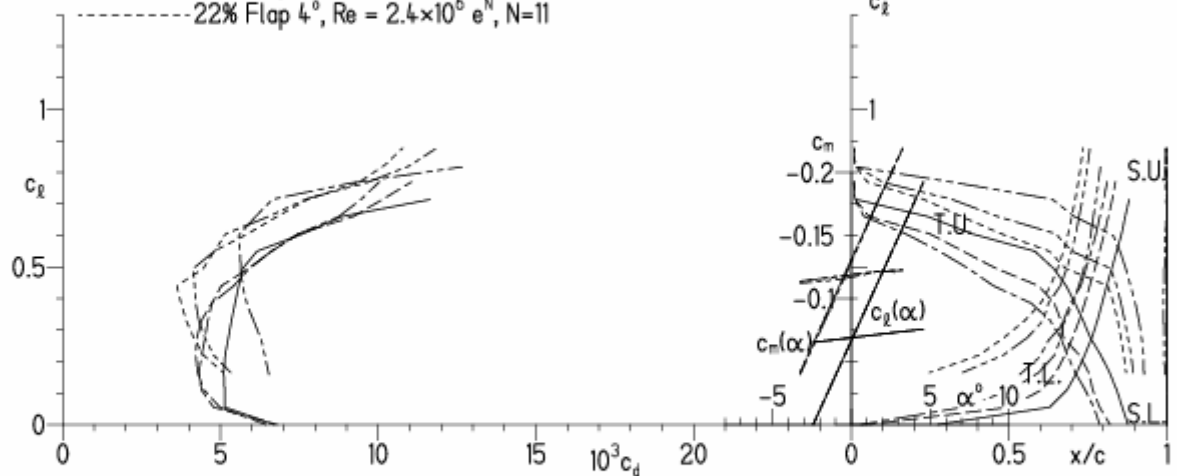
EPPLER 2005 V. 8.5.07 RUN 14.5.10 19:12



EPPLER 2005 V. 8.5.07 RUN 14.5.10 19:12

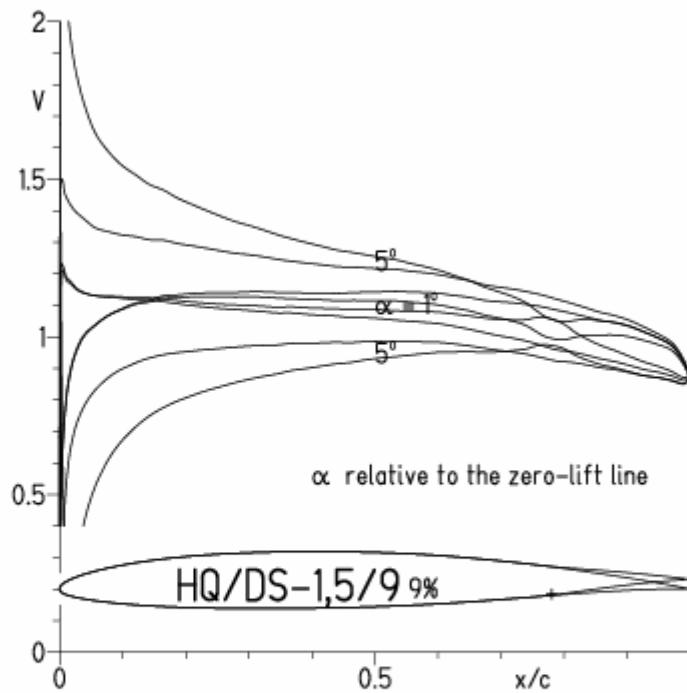
## HQ/DS-1,5/9 9%

- $Re = 0.8 \times 10^6$  e<sup>N</sup>, N=11
- - -  $1.6 \times 10^6$  e<sup>N</sup>, N=11
- - -  $2.4 \times 10^6$  e<sup>N</sup>, N=11
- - - 22% Flap  $4^\circ$ ,  $Re = 0.8 \times 10^6$  e<sup>N</sup>, N=11
- - - 22% Flap  $4^\circ$ ,  $Re = 1.6 \times 10^6$  e<sup>N</sup>, N=11
- - - 22% Flap  $4^\circ$ ,  $Re = 2.4 \times 10^6$  e<sup>N</sup>, N=11

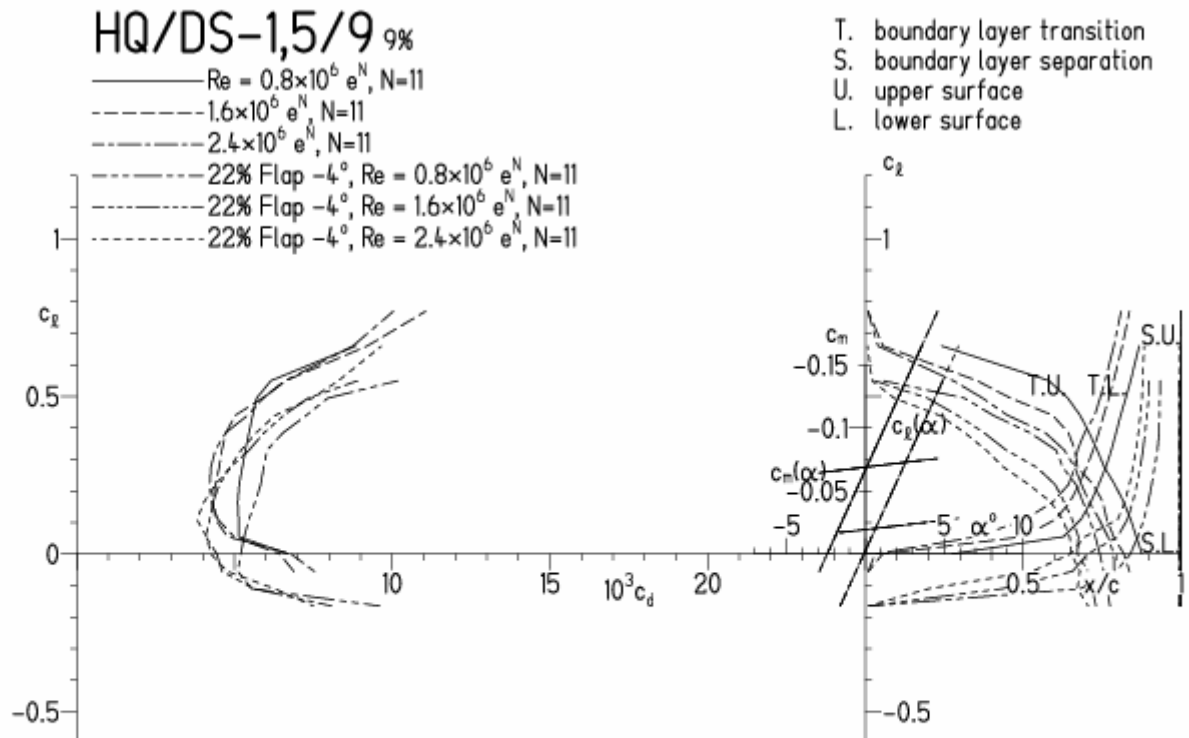


# HQ/DS-1,5/9-Polaren, N=11, mit $-4^\circ$ Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 14.5.10 18:20

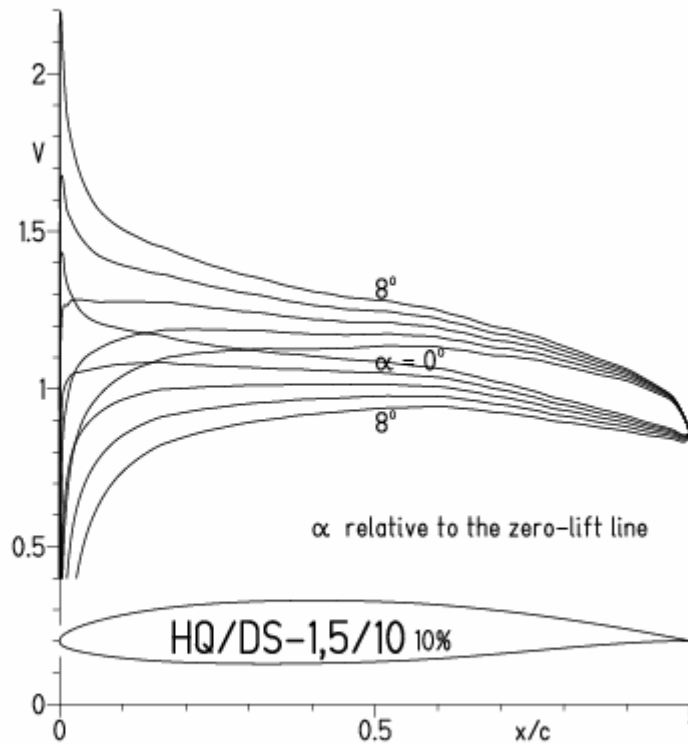


EPPLER 2005 V. 8.5.07 RUN 14.5.10 18:20

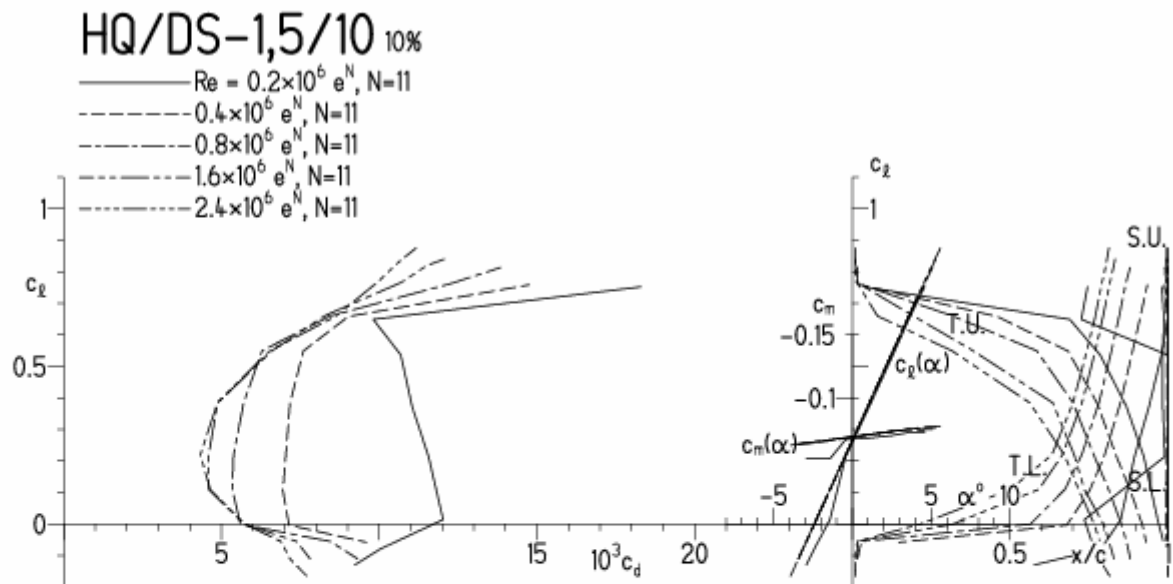


# HQ/DS-1,5/10-Polaren, N=11

EPPLER 2005 V. 8.5.07 RUN 14.5.10 16:33



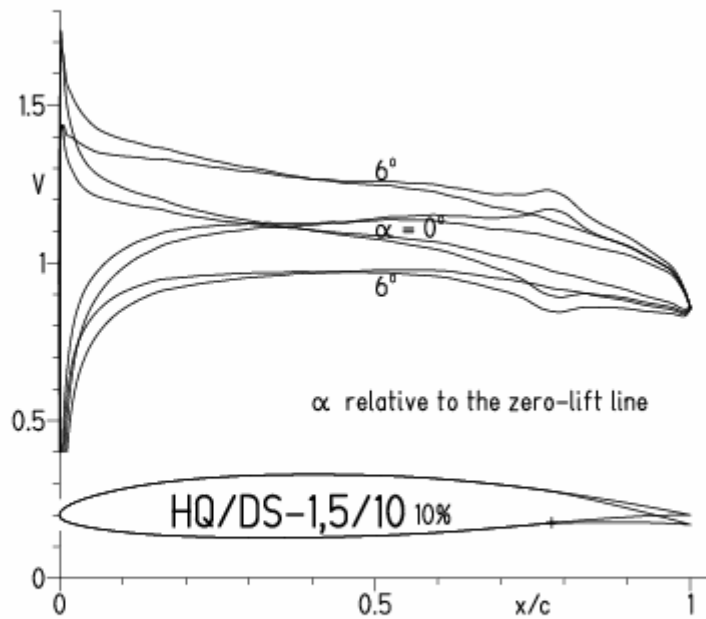
EPPLER 2005 V. 8.5.07 RUN 14.5.10 16:33



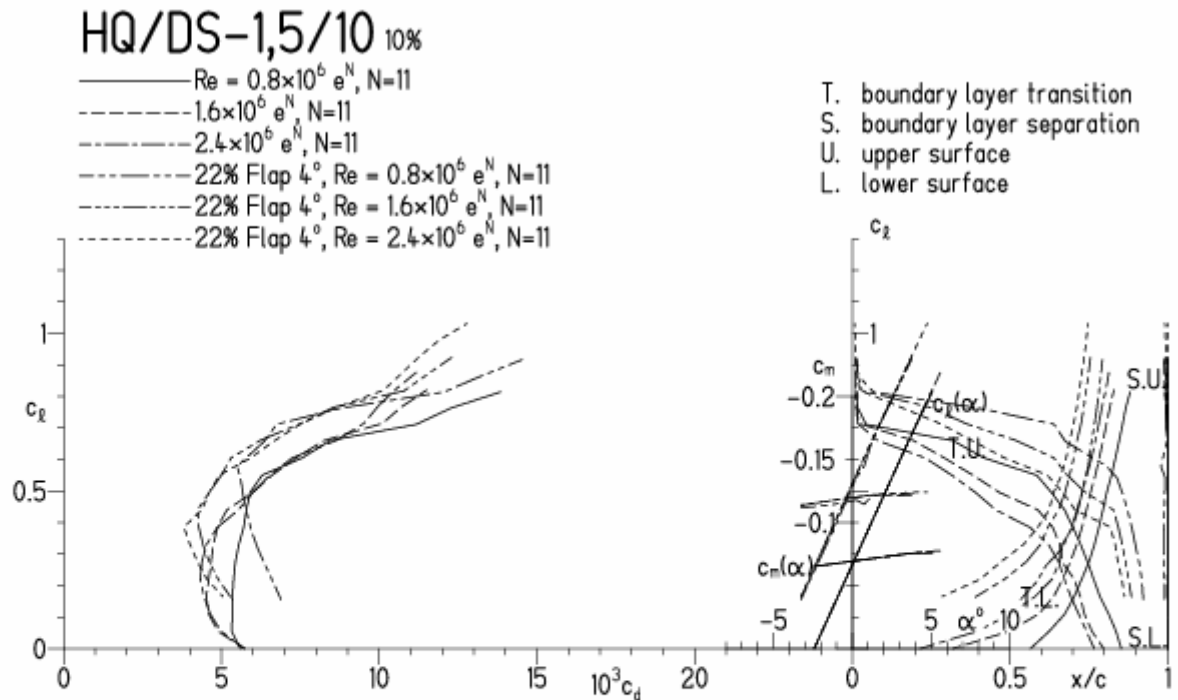


# HQ/DS-1,5/10-Polaren, N=11, mit 4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 14.5.10 18:59

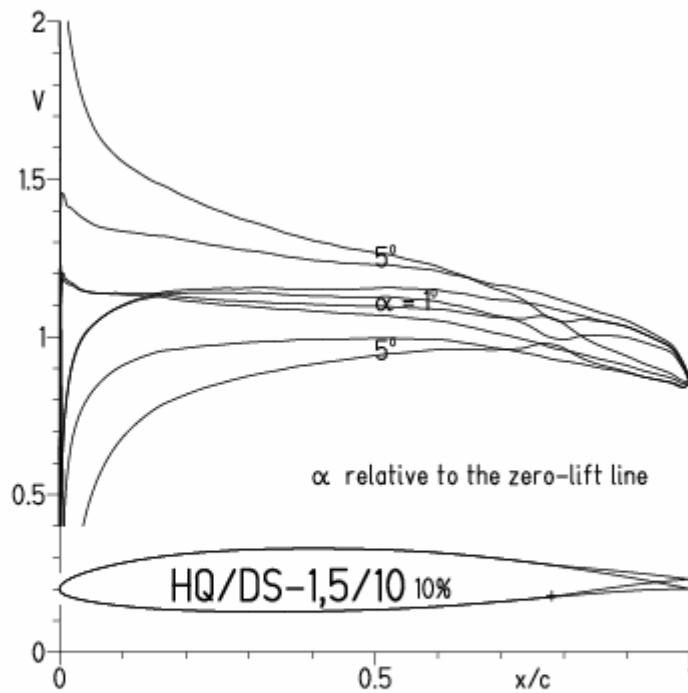


EPPLER 2005 V. 8.5.07 RUN 14.5.10 18:59

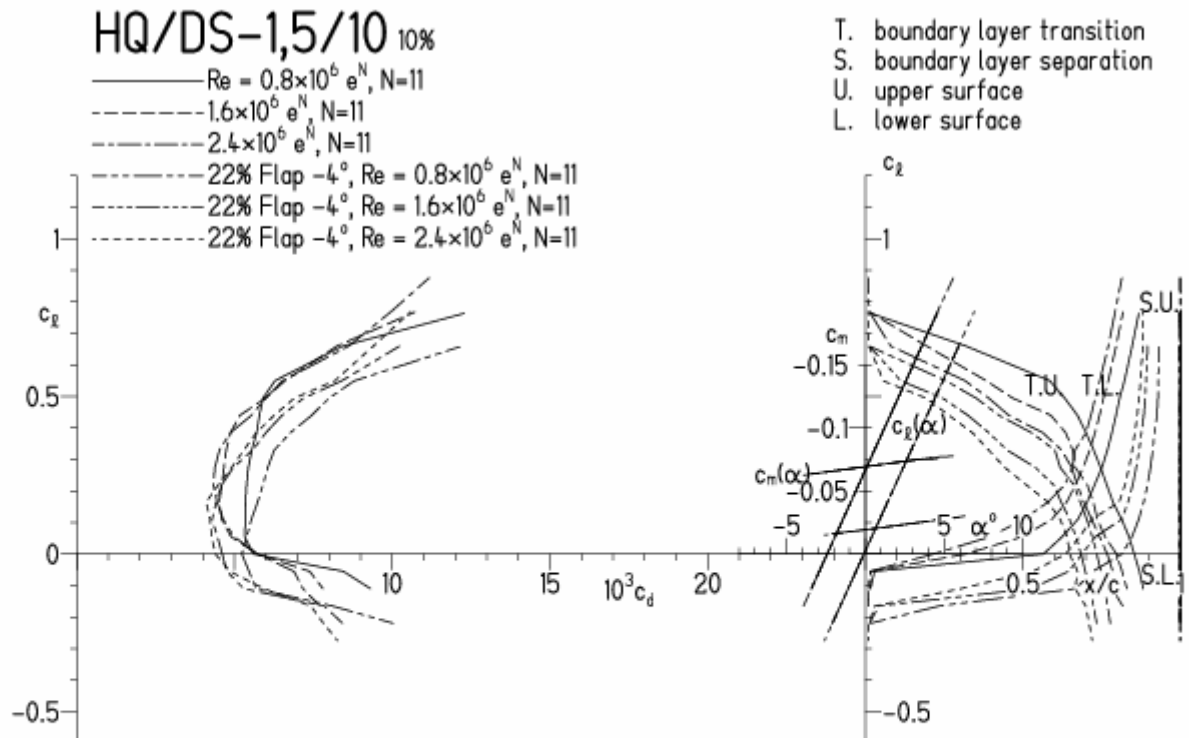


# HQ/DS-1,5/10-Polaren, N=11, mit $-4^\circ$ Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 14.5.10 17:59



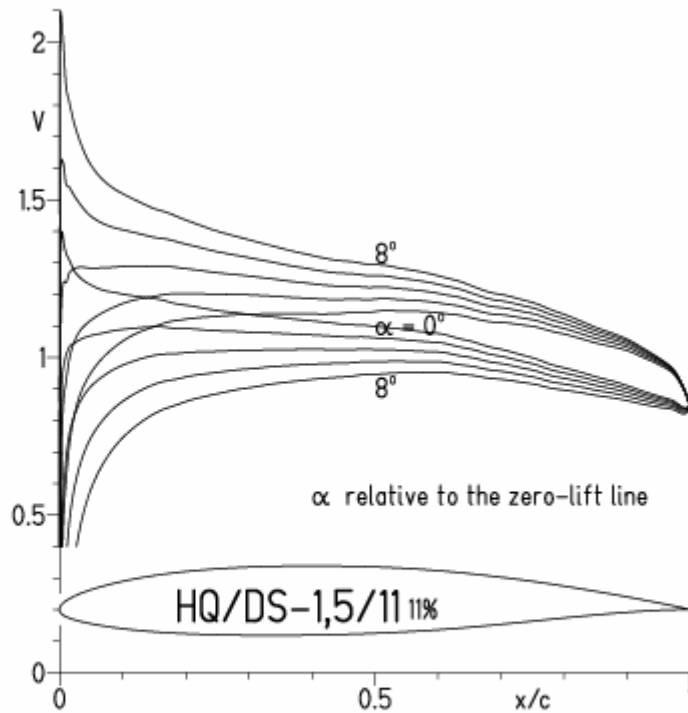
EPPLER 2005 V. 8.5.07





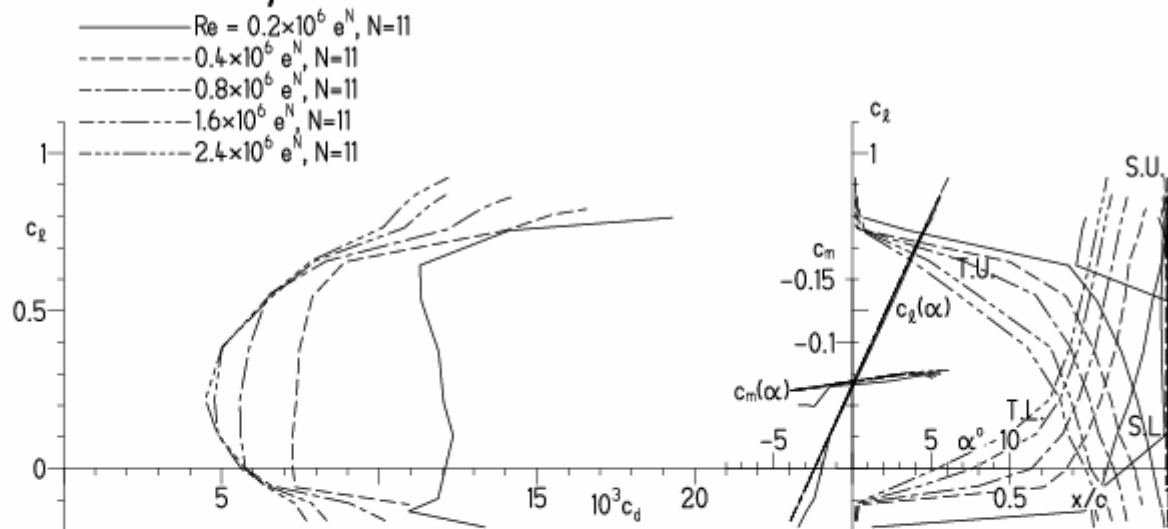
# HQ/DS-1,5/11-Polaren, N=11

EPPLER 2005 V. 8.5.07 RUN 14.5.10 16:41



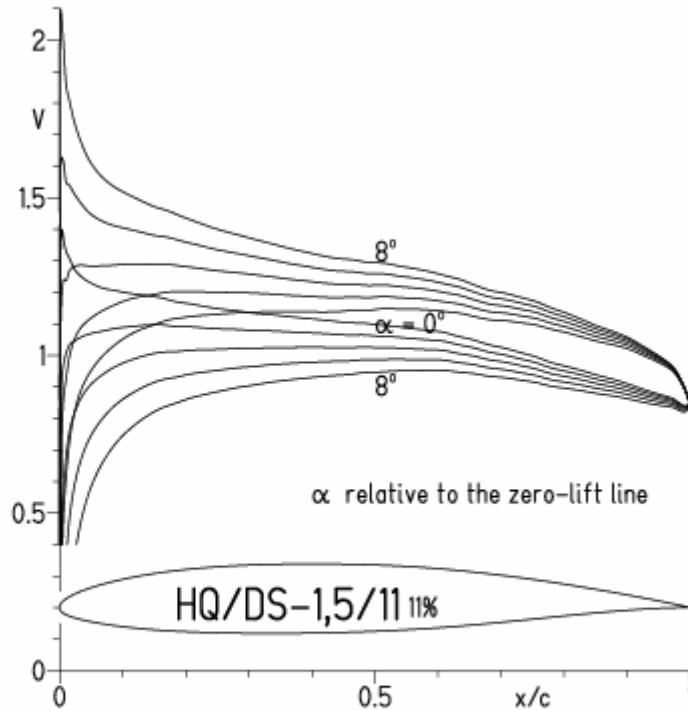
EPPLER 20

## HQ/DS-1,5/11 11%

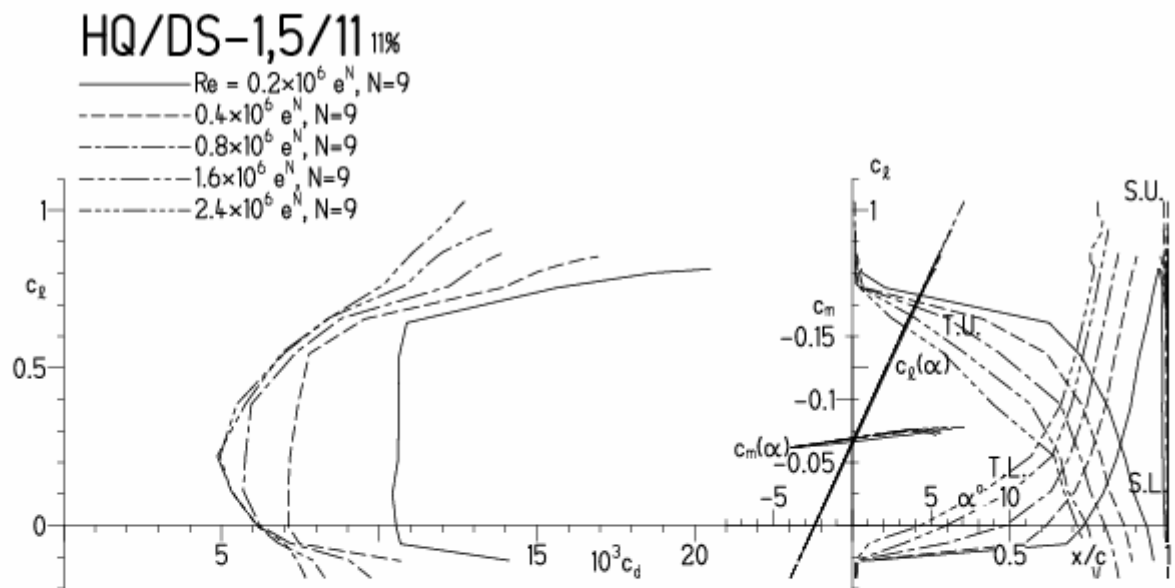


# HQ/DS-1,5/11-Polaren, N=9

EPPLER 2005 V. 8.5.07 RUN 14.5.10 16:44

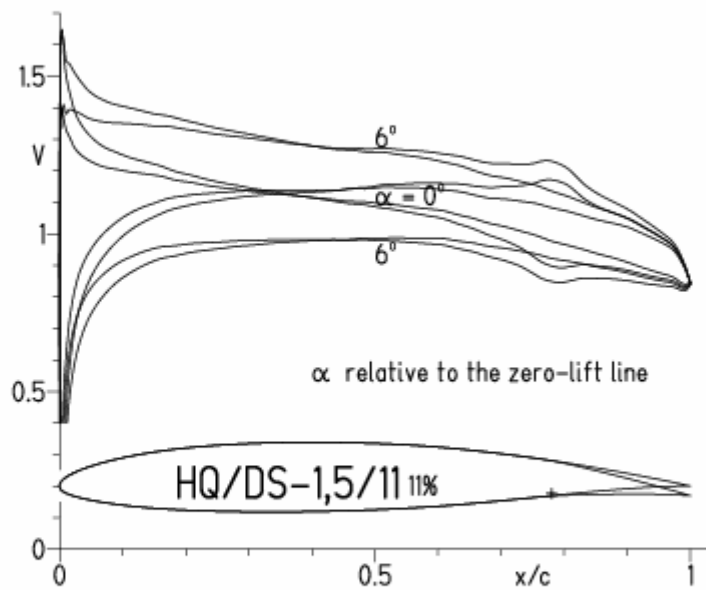


EPPLER 2005 V.



# HQ/DS-1,5/11-Polaren, N=11, mit 4° Wölbklappenausschlag

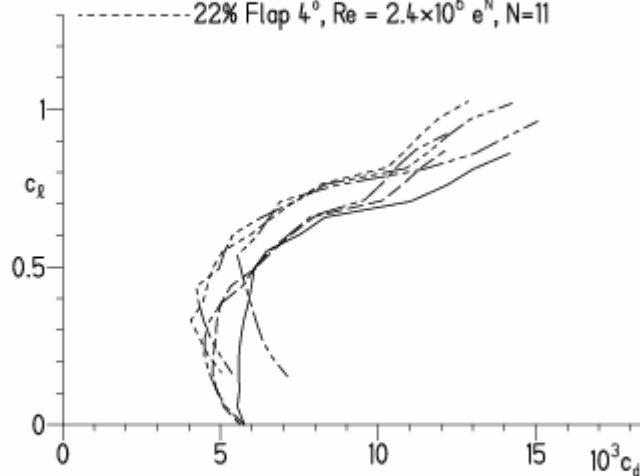
EPPLER 2005 V. 8.5.07 RUN 14.5.10 18:55



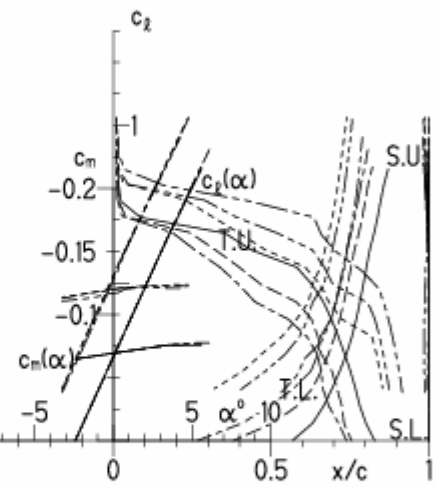
EPPLER 200

## HQ/DS-1,5/11 11%

- $Re = 0.8 \times 10^6$  e<sup>N</sup>, N=11
- - -  $1.6 \times 10^6$  e<sup>N</sup>, N=11
- - -  $2.4 \times 10^6$  e<sup>N</sup>, N=11
- - - 22% Flap  $4^\circ$ ,  $Re = 0.8 \times 10^6$  e<sup>N</sup>, N=11
- - - 22% Flap  $4^\circ$ ,  $Re = 1.6 \times 10^6$  e<sup>N</sup>, N=11
- - - 22% Flap  $4^\circ$ ,  $Re = 2.4 \times 10^6$  e<sup>N</sup>, N=11

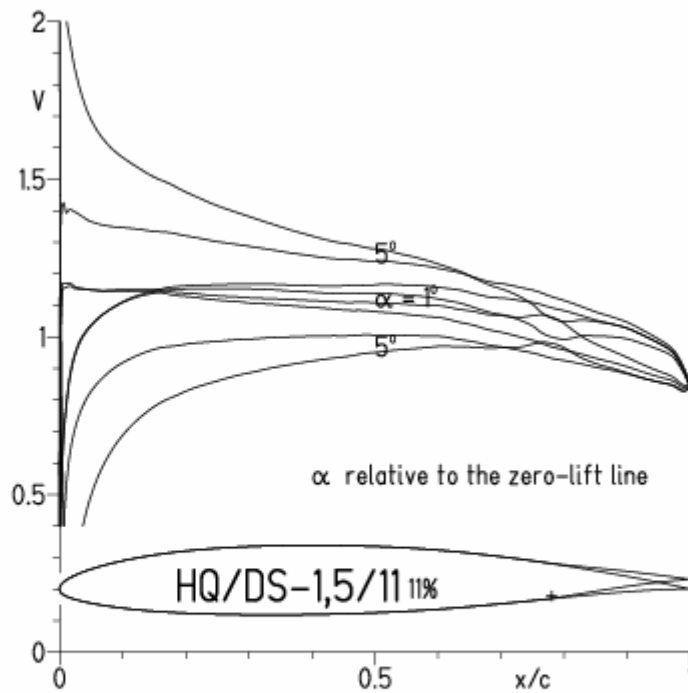


- T. boundary layer transition
- S. boundary layer separation
- U. upper surface
- L. lower surface

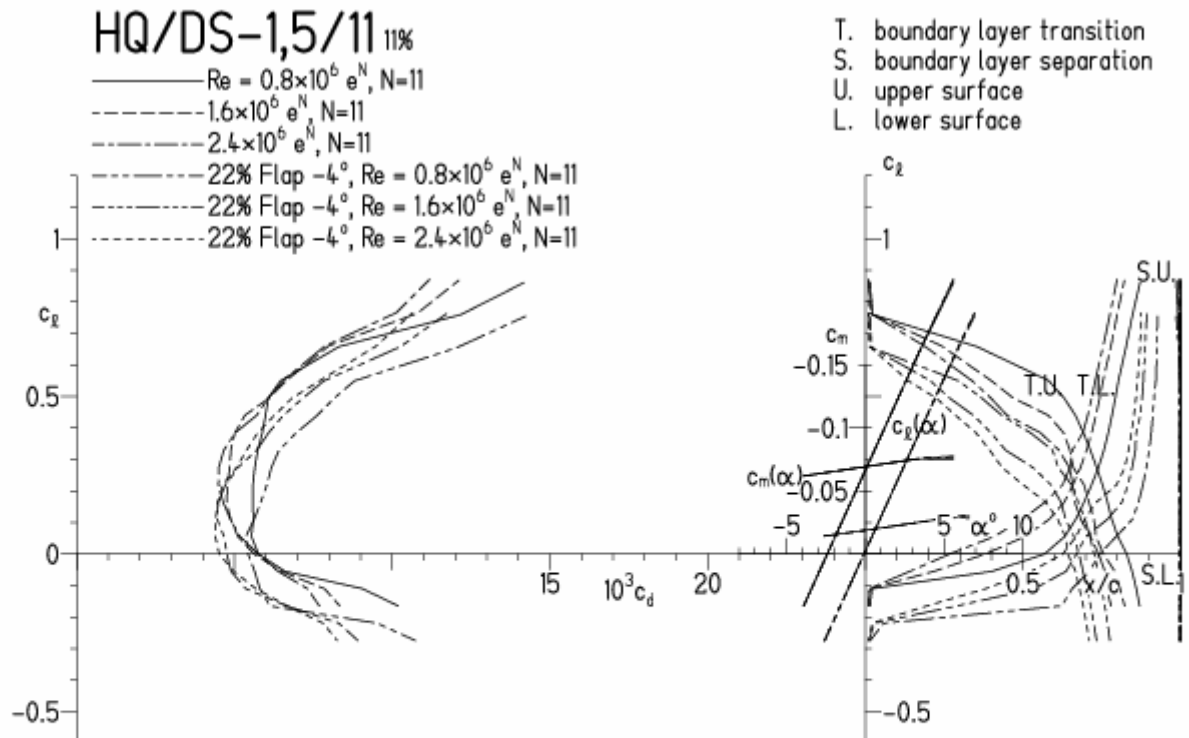


# HQ/DS-1,5/11-Polaren, N=11, mit -4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 14.5.10 18:04

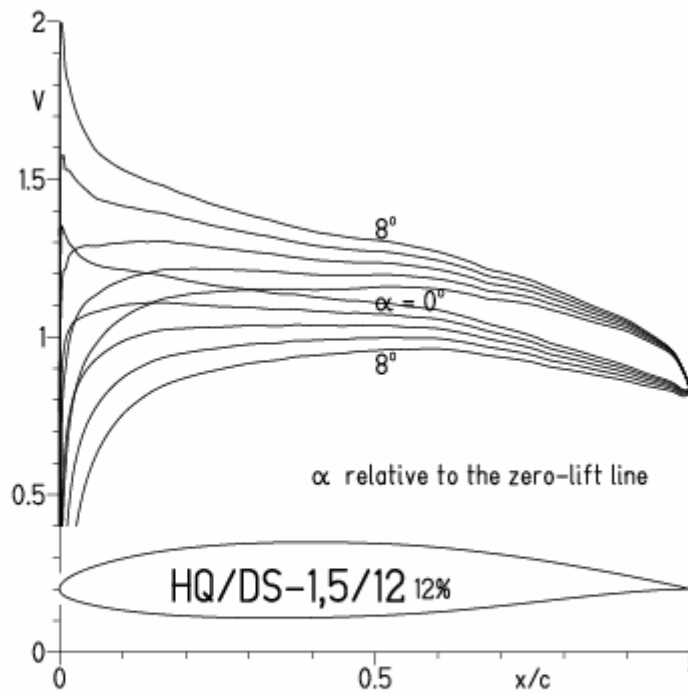


EPPLER 2005 V.

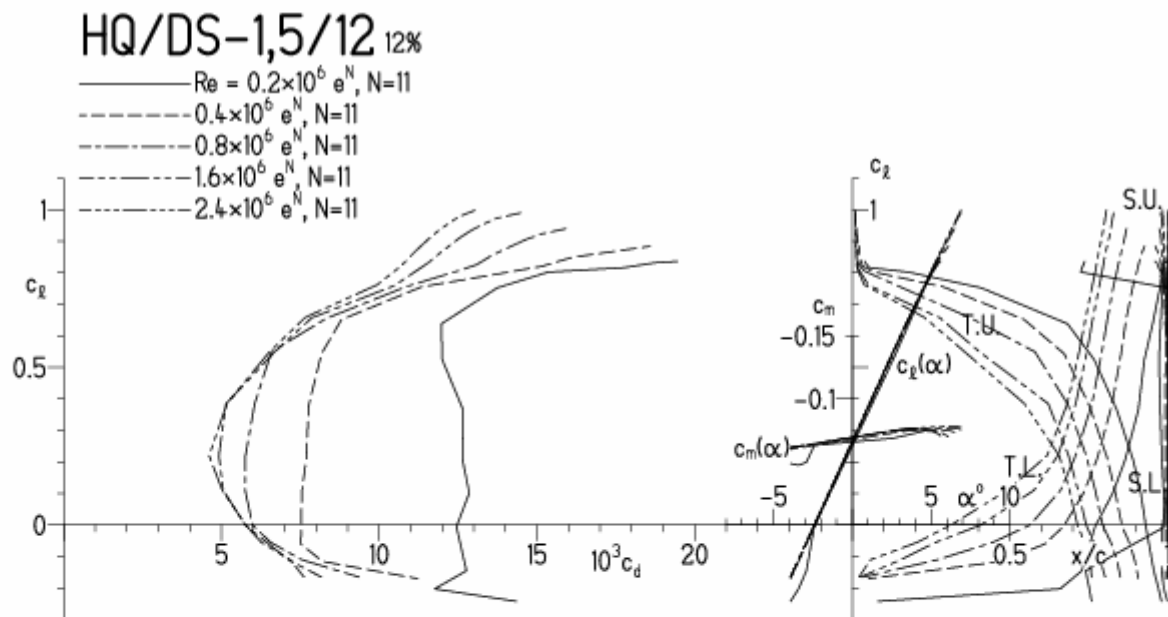


# HQ/DS-1,5/12-Polaren, N=11

EPPLER 2005 V. 8.5.07 RUN 14.5.10 16:48

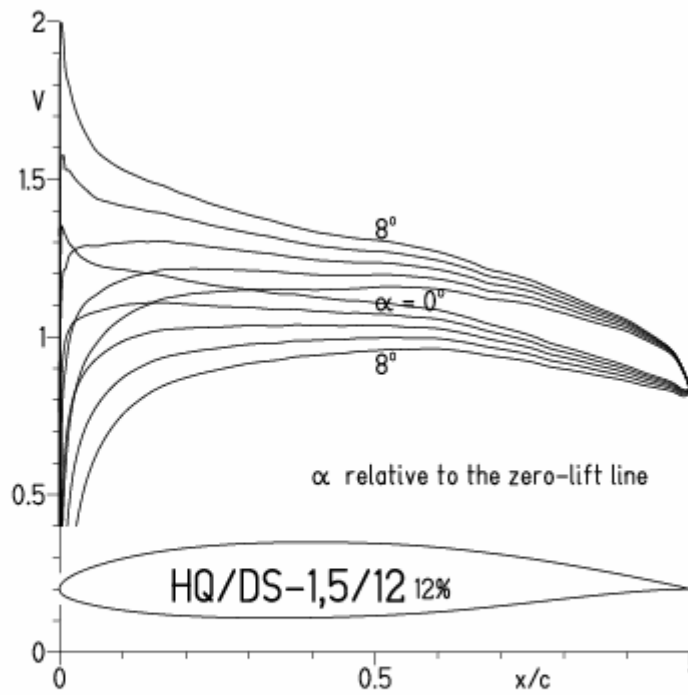


EPPLER 2005 V. 8.5.07 RUN 14.5.10 16:4

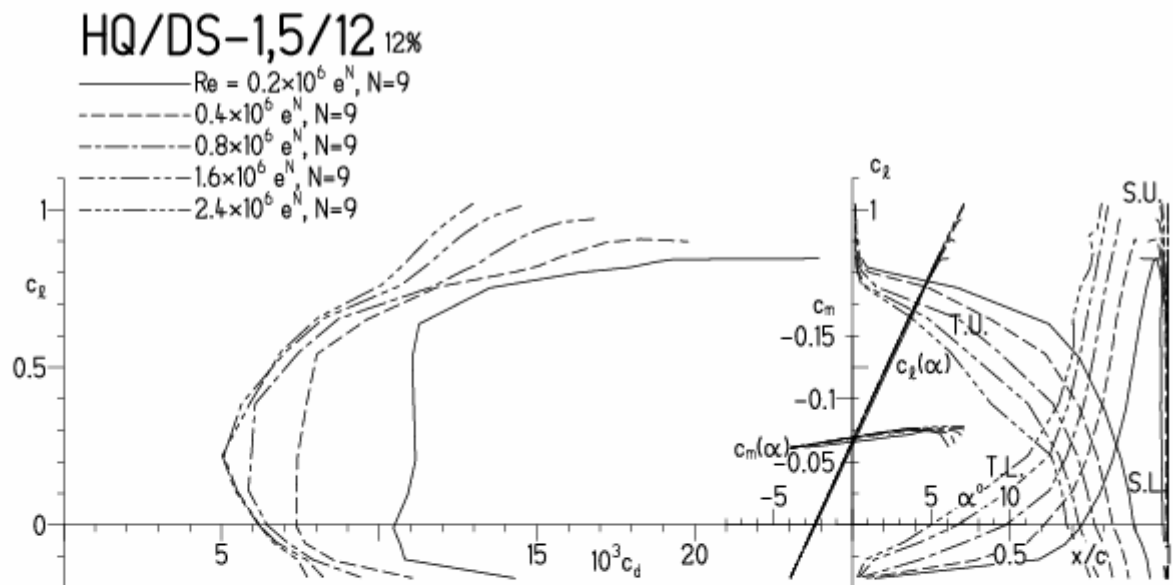


# HQ/DS-1,5/12-Polaren, N=9

EPPLER 2005 V. 8.5.07 RUN 14.5.10 16:52

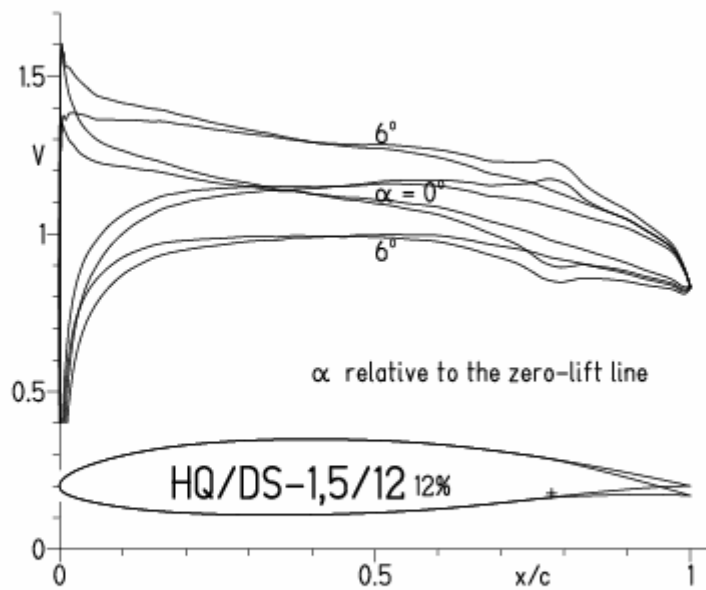


EPPLER 2005 V. 8.5.

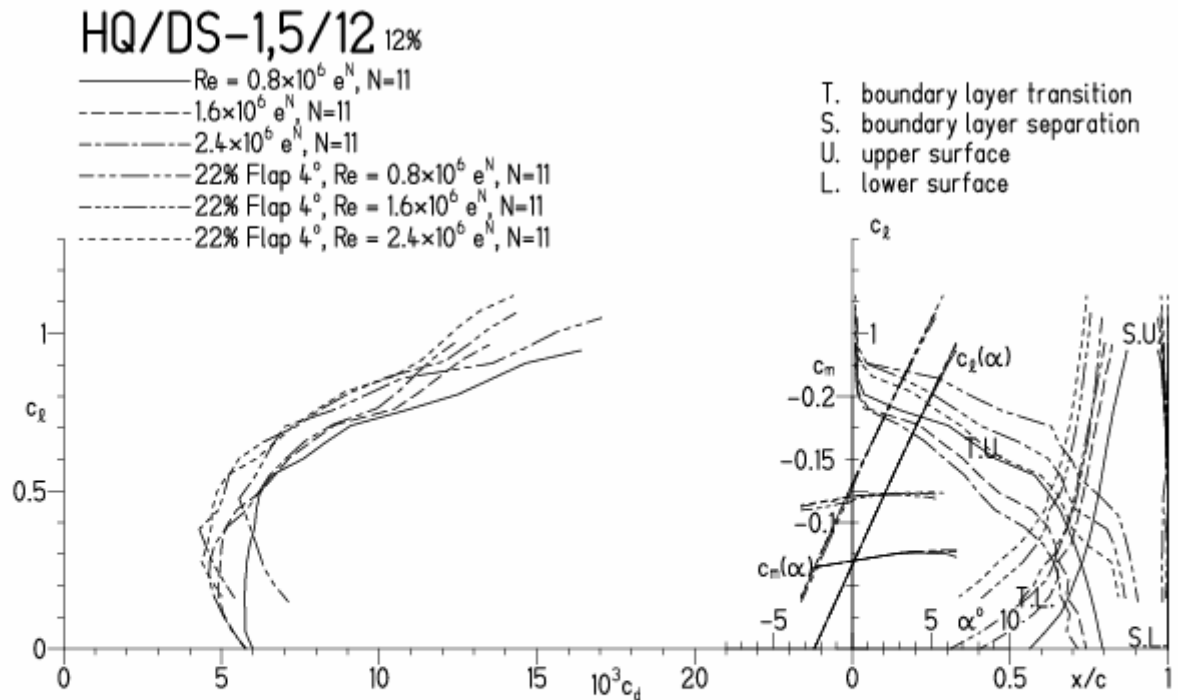


# HQ/DS-1,5/12-Polaren, N=11, mit 4° Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 14.5.10 19:04

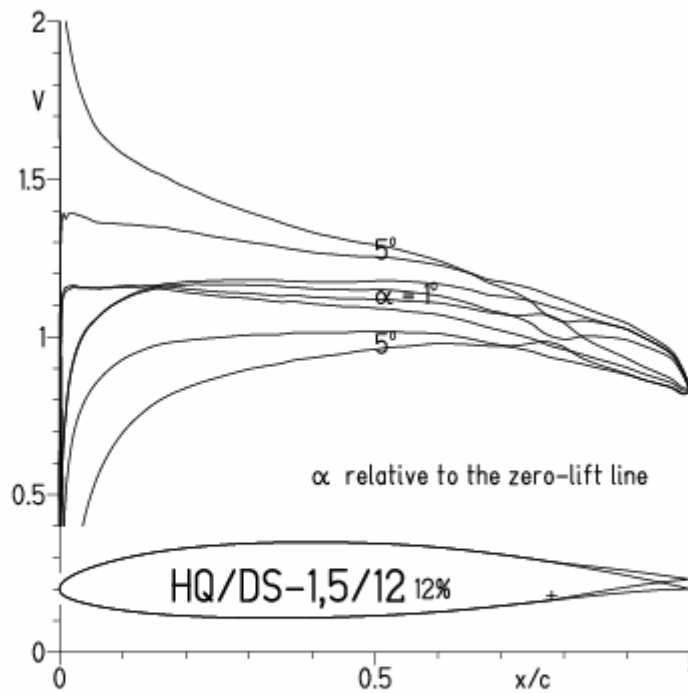


EPPLER 2005 V. 8.5.07 RUN 14.5.10 19:04



# HQ/DS-1,5/12-Polaren, N=11, mit $-4^\circ$ Wölbklappenausschlag

EPPLER 2005 V. 8.5.07 RUN 14.5.10 18:09



EPPLER 2005 V. 8.

