











**Figure 6.** Velocity contour and pressure coefficient distribution for the P0, P1, P2, P3, and P4 models.

sed morphing approach provides substantial aerodynamic gains primarily at low-to-moderate angles of attack, while performance saturation is reached at higher angles of attack. To analyze the flow field characteristics, velocity contours and pressure coefficient ( $C_p$ ) distributions at an angle of attack of  $5^\circ$ , where the highest aerodynamic efficiency was achieved, are presented in

**Fig. 6** for the P0–P4 configurations, respectively. The velocity contours and pressure coefficient distributions indicate a strengthened suction peak in the leading-edge region and the formation of a more pronounced low-pressure region along the upper surface. This physical mechanism demonstrates that the morphing approach enhances lift generation while simultaneously suppressing



