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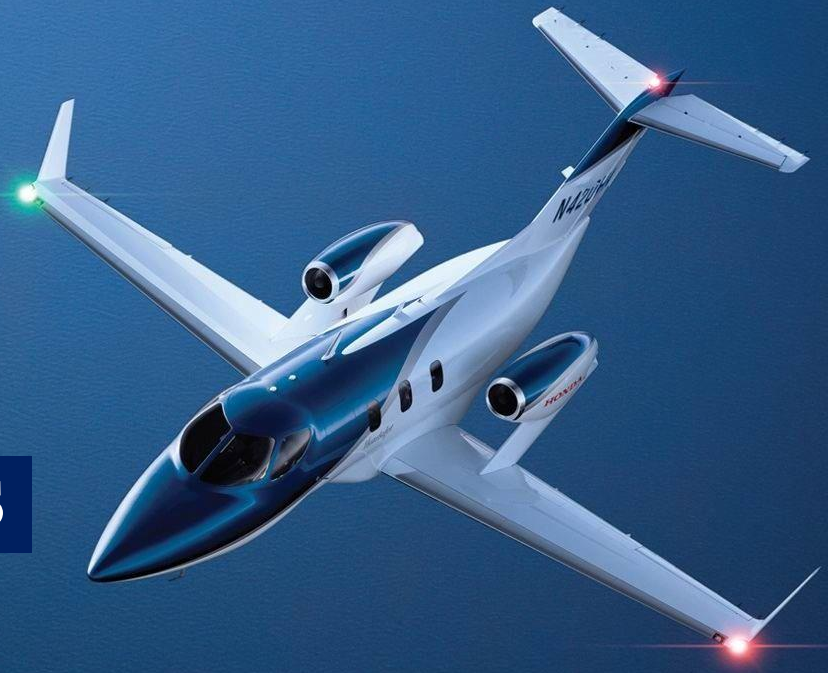
NACA AEROFOIL SERIES



NACA

- The NACA airfoils are airfoil shapes for aircraft wings developed by the National Advisory Committee for Aeronautics (NACA).
- The shape of the NACA airfoils is described using a series of digits following the word "NACA".
- The parameters in the numerical code can be entered into equations to precisely generate the cross-section of the airfoil and calculate its properties.

Most Popular NACA Series are

- ✓ 4 Digit NACA Aerofoil
- ✓ 5 Digit NACA Aerofoil
- ✓ 6 Digit NACA Aerofoil

4 Digit NACA Series

NACA 2412

- First digit gives maximum camber in 100th of the chord.

$$2 \rightarrow 2 \times \frac{c}{100} = 0.02c$$

- Second digit gives location of maximum camber in 10th of the chord.

$$4 \rightarrow 4 \times \frac{c}{10} = 0.4c$$

- Last two digits gives maximum thickness of a aerofoil in 100th of the chord.

$$12 \rightarrow 12 \times \frac{c}{100} = 0.12c$$

5 Digit NACA Series

NACA 23012

- First digit gives maximum lift coefficient in 10th when first digit multiply with 3/2

$$2 \rightarrow 2 \times \frac{3}{2} \times \frac{1}{10} = 0.3 = \mathrm{CL}$$

- Second & third digit gives location of the maximum camber in 100th of the chord when it divided by two.

$$30 \rightarrow \frac{30}{2} \times \frac{c}{100} = 0.15c$$

- Last two digits gives maximum thickness of a aerofoil in 100th of the chord.

$$12 \rightarrow 12 \times \frac{c}{100} = 0.12c$$

6 Digit NACA Series

NACA 6-5218

- **First digit shows the 6 NACA series aerofoil**

  $6 \rightarrow 6\ Series\ Identification$

- **Second digit gives location of the minimum pressure point on the aerofoil from leading edge in 10th of the chord.**

  5 $\rightarrow 5 \times \frac{c}{10} = 0.5c$

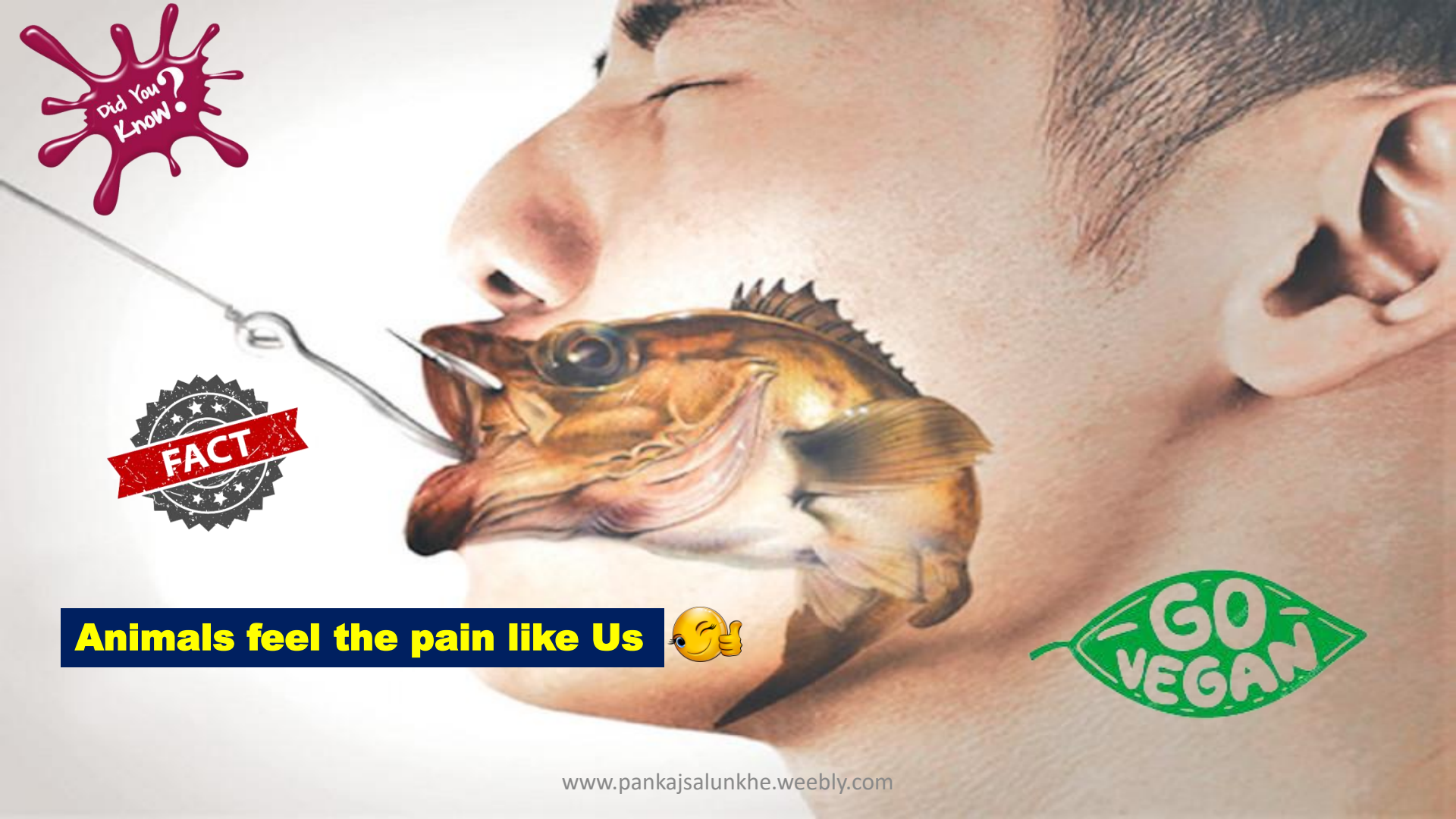
- **Third digit gives the coefficient of lift in 10th.**

  2 $\rightarrow \frac{2}{10} = 0.2 = CL$

- **Last two digits gives maximum thickness of a aerofoil in 100th of the chord.**

  18 $\rightarrow 18 \times \frac{c}{100} = 0.18c$

CREATE YOUR OWN AEROFOIL HERE


Did You Know?
FACT
Animals feel the pain like Us
GO VEGAN

धन्यवाद

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