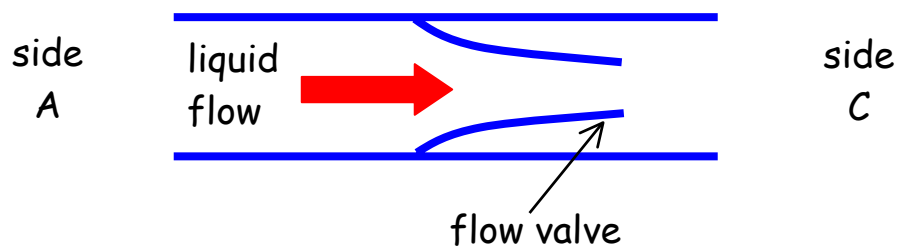


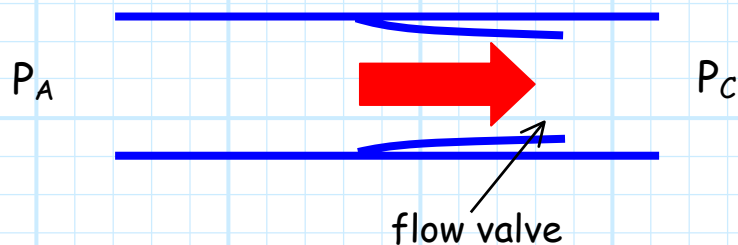
The Diode

Mechanical Analogy

An ideal diode is sort of like a mechanical valve !



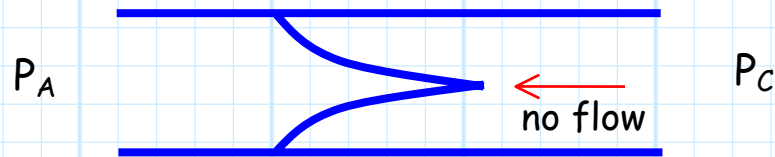
Case 1: Valve allows liquid to flow in pipe from side A to side C.



There is no drop in pressure (P) from side A to side C.

$$\rightarrow P_A - P_C = 0$$

Case 2: Valve prevents liquid from flowing **back** from side C to side A.



No flow occurs when pressure P_C is greater than pressure P_A

→ $P_A - P_C < 0$

Note the **analogies** with an ideal diode:

Valve

Pressure

Liquid Flow

Side A

Side C

Case 1

Case 2

Diode

Voltage

Current

Anode

Cathode

Forward Bias

Reverse Bias

