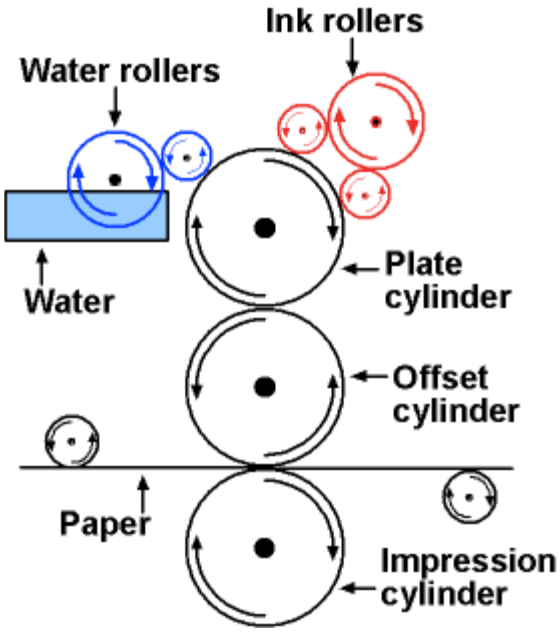
OFFSET PRINTING



Offset lithography printing process

Offset printing – this is a printing process that uses an intermediate blanket cylinder that transfers the image from the plate to the substrate. The inked image is transferred (or "offset") from a plate first to a rubber blanket, then to the printing surface. When used in combination with the lithographic process, which is based on the repulsion of oil and water, the offset technique employs a flat (planographic) image carrier on which the image to be printed obtains ink from ink rollers, while the non-printing area attracts a film of water, keeping the nonprinting areas ink-free.

The advantages of offset printing include:

- Consistent high image quality — sharper and cleaner than letter printing because the rubber blanket conforms to the texture of the printing surface
- Usability on a wide range of smooth papers.
- Quick and easy production of printing plates
- Longer plate life than on direct litho presses — because there is no direct contact between the plate and the printing surface.

The most common kind of offset printing is derived from photo offset process. In such cases, the documents to be printed are first recorded on film negatives. Images from such negatives are then transferred to photomechanical printing plates much the same way as photographs are developed. A measured amount of light is allowed to pass through the negatives and exposed the printing plate. A chemical reaction then occurs that allows an ink-receptive coating to be activated, thus transferring of the image from the negative to the plate.