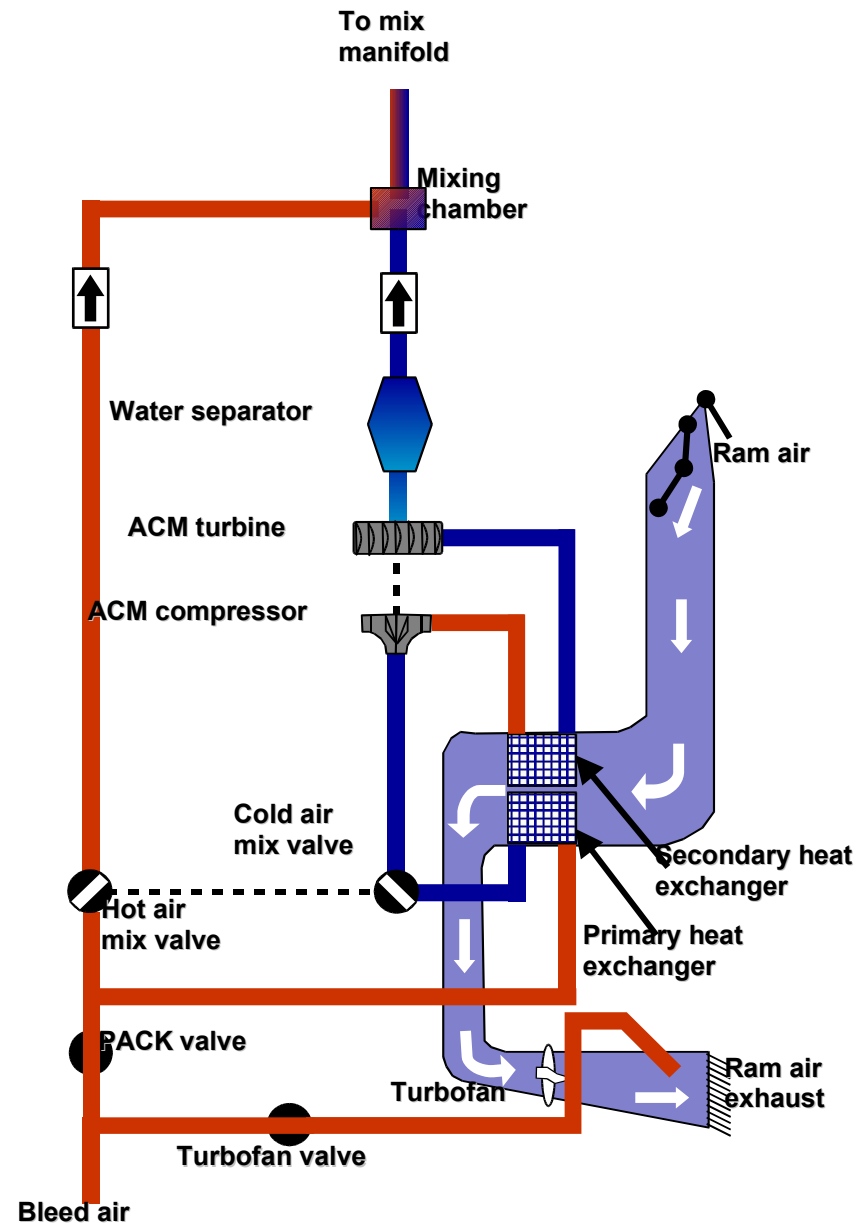


PACK AIR FLOW

The following is what occurs within a PACK as bleed air is processed:

- 1) As bleed air enters the PACK, some of the air is directed to the turbofan valve. If the turbofan valve is open, the bleed air operates the turbofan to augment ram air flow.
- 2) Bleed air passes through the PACK valve and is split in two directions. One duct leads to the hot air mix valve and the other duct leads to the primary heat exchanger. Bleed air that flows to the hot air mix valve is directed around the PACK and is not processed. It will eventually join the processed air downstream in the mixing chamber. Bleed air that flows to the primary heat exchanger is cooled by ram air. As this cooled air exits the primary heat exchanger, it flows through the cold air mix valve.
- 3) From the cold air mix valve, the bleed air now proceeds to the air cycle machine (ACM). The ACM compressor heats the bleed air during compression. This warmer air now flows to the secondary heat exchanger for cooling, once again, by the ram air system.
- 4) As this cooled air exits the secondary heat exchanger, it flows to the ACM turbine. Here, the air expands which results in the air temperature dropping even further.
- 5) This now very cool air flows to the water separator where excess moisture is removed.
- 6) Leaving the water separator, the air travels to the mixing chamber where it is joined by the warm bleed air that originally flowed through the hot air mix valve.
- 7) This mixture of air now flows to the mix manifold where it is distributed to the cabin via the left and right sidewall risers.



737-300 Pneumatic Schematic

