

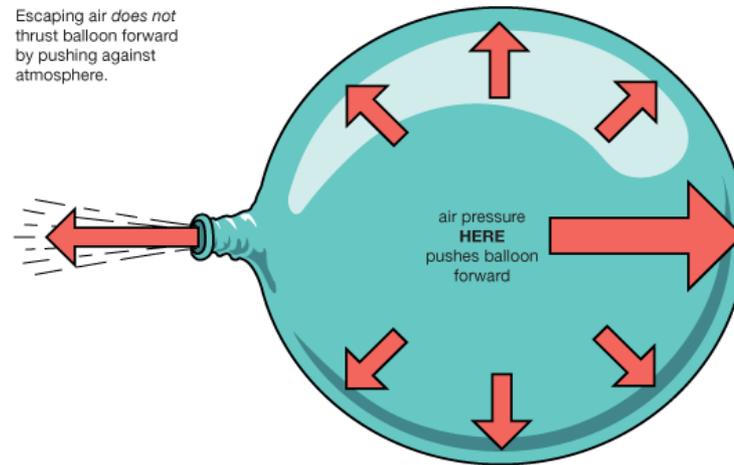


MOTORES A REACCIÓN

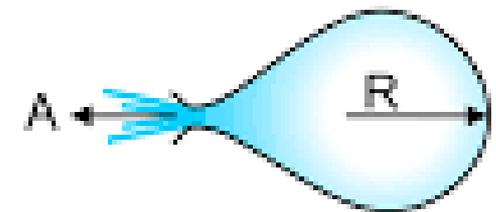
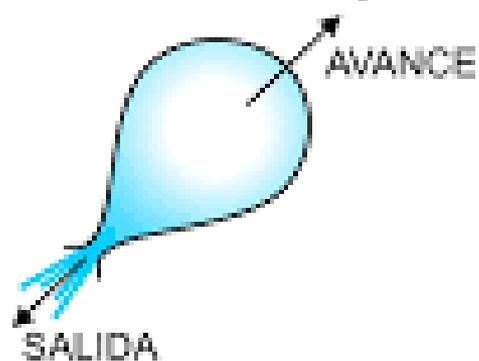
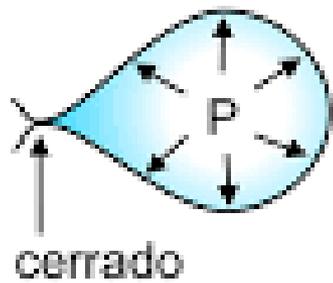
MOTORES A REACCIÓN

How a jet works

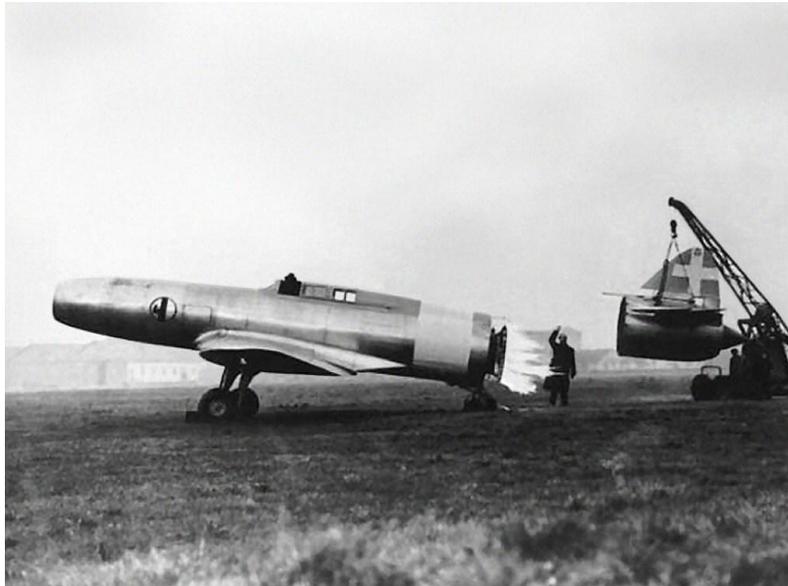
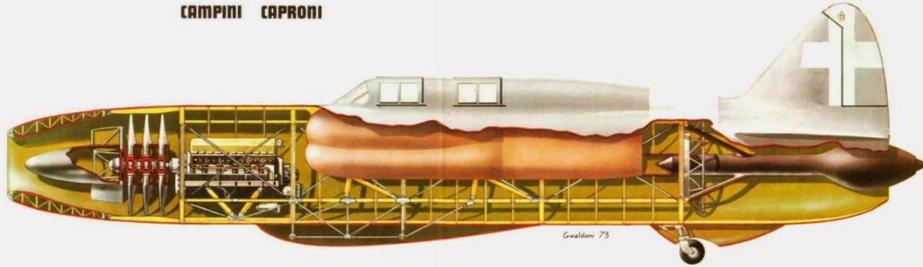
Escaping air *does not* thrust balloon forward by pushing against atmosphere.



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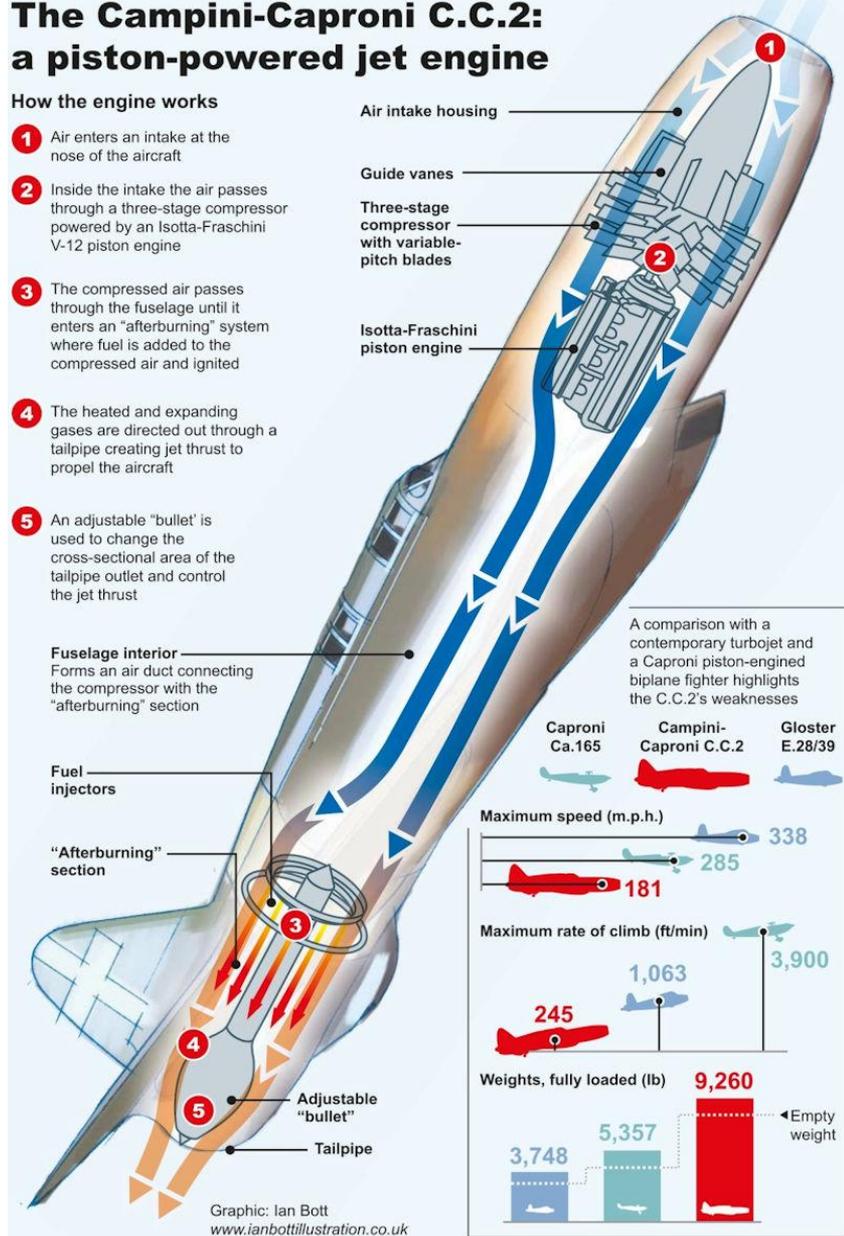
MOTORES A REACCIÓN



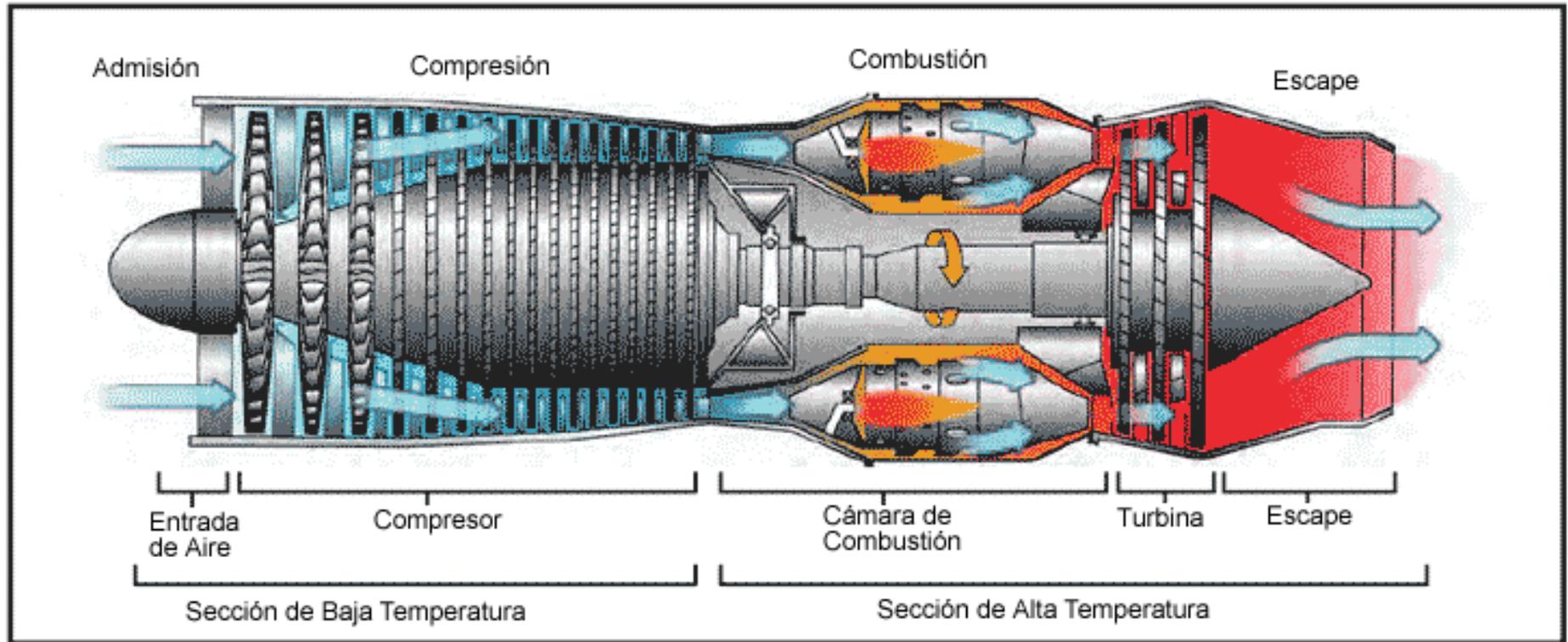
The Campini-Caproni C.C.2: a piston-powered jet engine

How the engine works

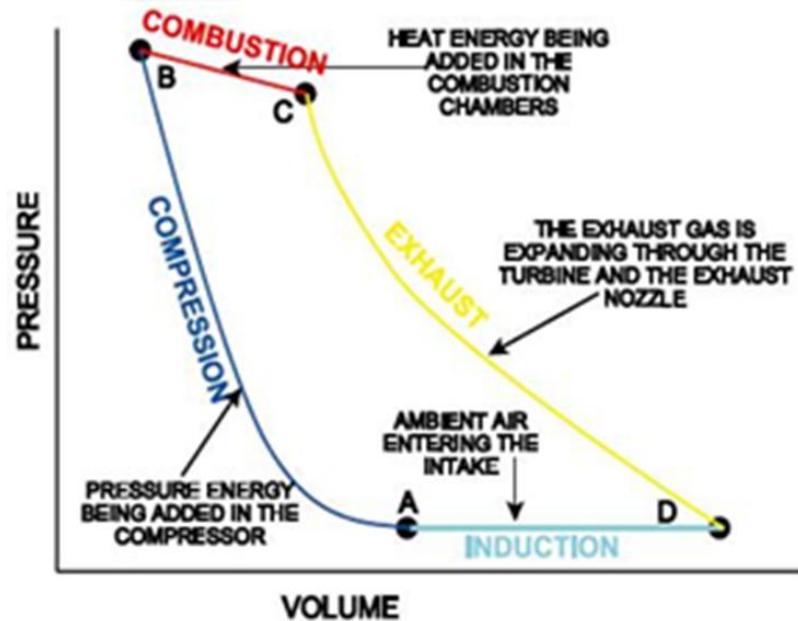
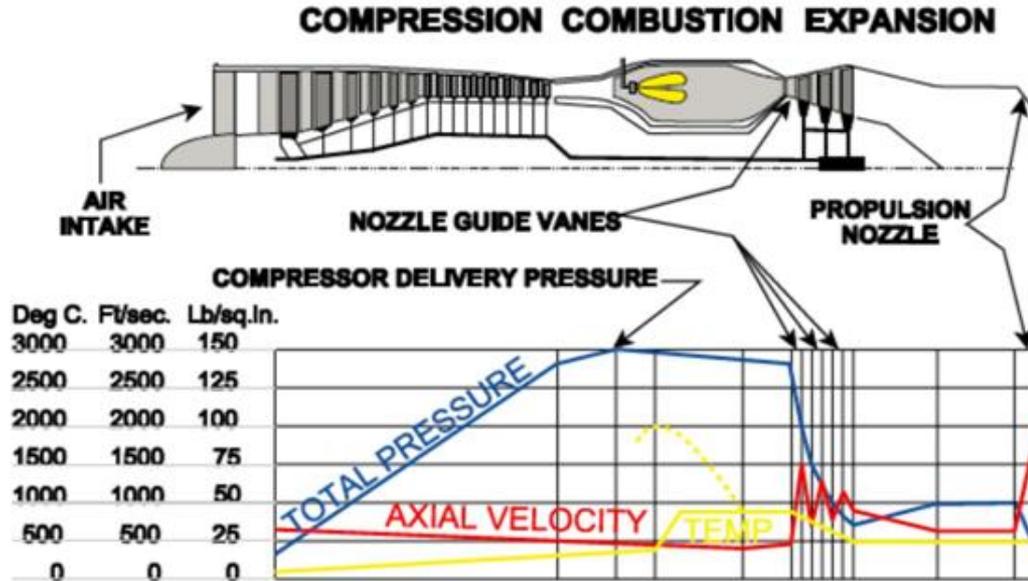
- 1 Air enters an intake at the nose of the aircraft
- 2 Inside the intake the air passes through a three-stage compressor powered by an Isotta-Fraschini V-12 piston engine
- 3 The compressed air passes through the fuselage until it enters an "afterburning" system where fuel is added to the compressed air and ignited
- 4 The heated and expanding gases are directed out through a tailpipe creating jet thrust to propel the aircraft
- 5 An adjustable "bullet" is used to change the cross-sectional area of the tailpipe outlet and control the jet thrust



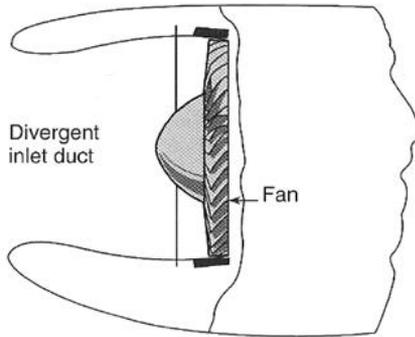
MOTORES A REACCIÓN



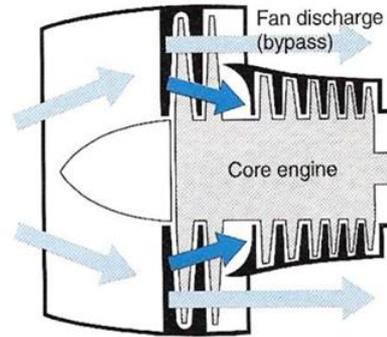
MOTORES A REACCIÓN



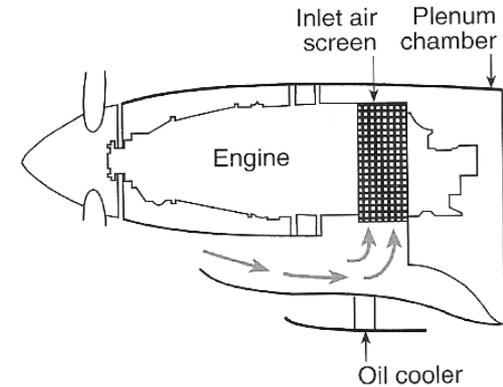
DIFUSOR DE ENTRADA



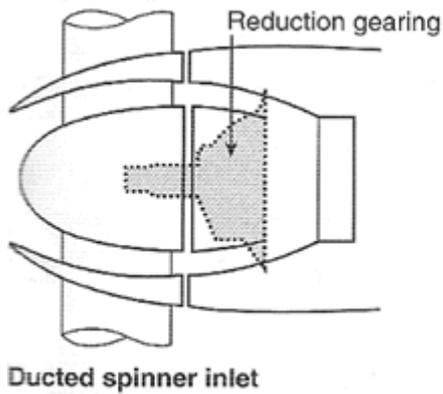
Conducto de entrada divergente subsónico de motor turbofan



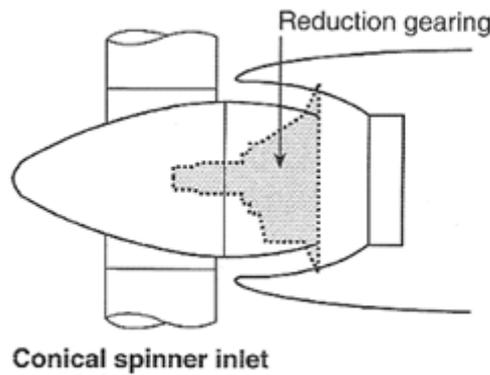
Conducto de entrada divergente usado en motor turbofan de alto índice de derivación.



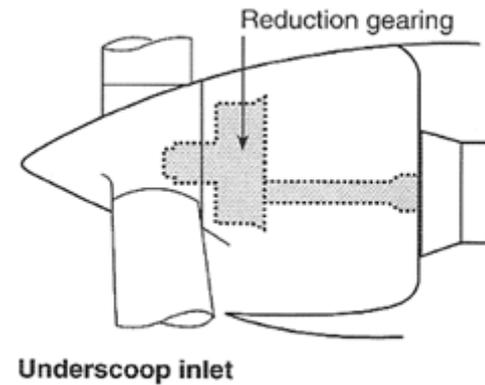
El motor turboprop P&W (Canadá) PT6 tiene la entrada de aire al compresor en la parte trasera del motor.



Ducted spinner inlet



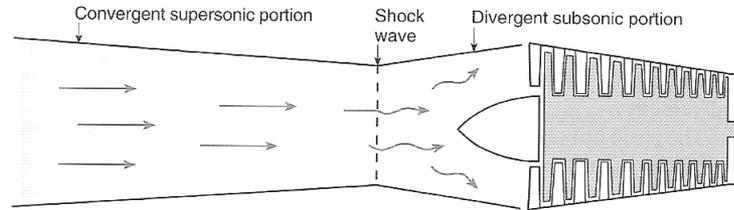
Conical spinner inlet



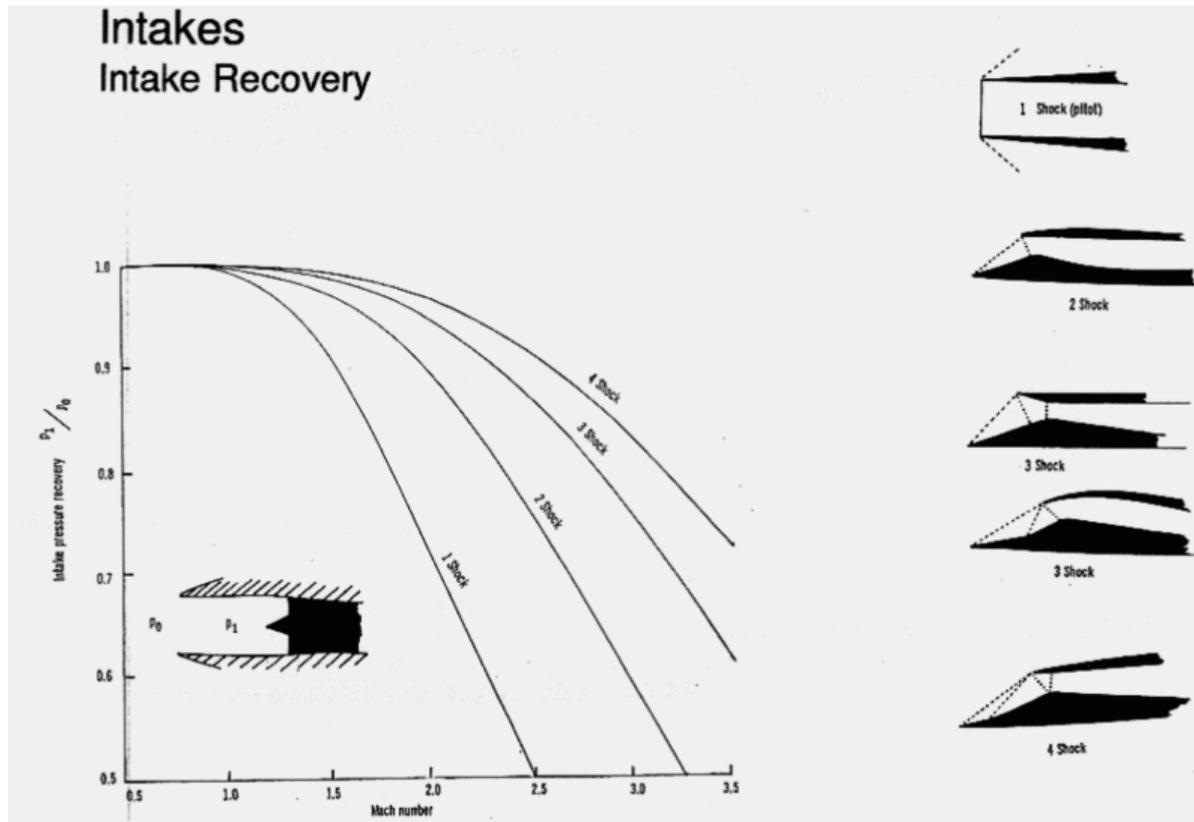
Underscoop inlet

Conductos de entrada típicos para motores turboprop.

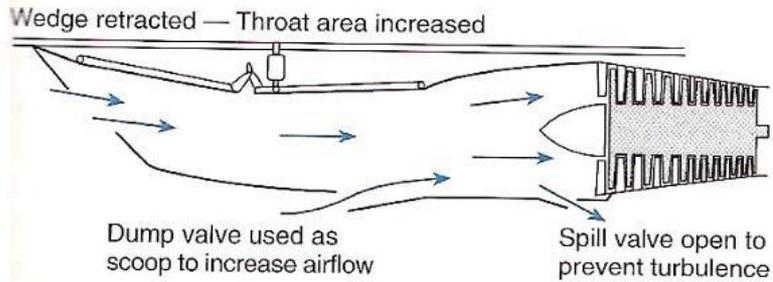
DIFUSOR DE ENTRADA



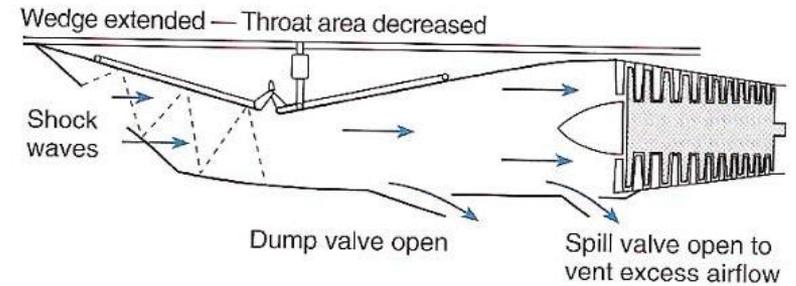
El aire de entrada supersónico se decelera hasta Mach 1'0 en la zona convergente del conducto de entrada, formándose una onda de choque. A partir de la onda de choque el movimiento del aire es subsónico y sufre una mayor deceleración en la zona divergente del conducto de entrada antes de entrar en el compresor.



DIFUSOR DE ENTRADA

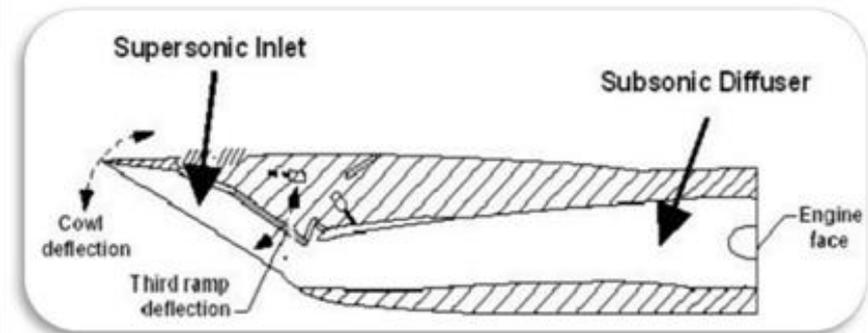
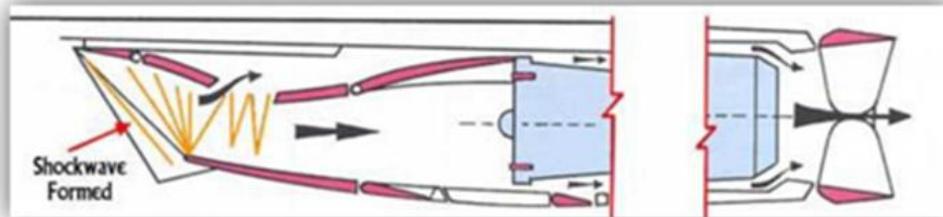


Subsonic Condition

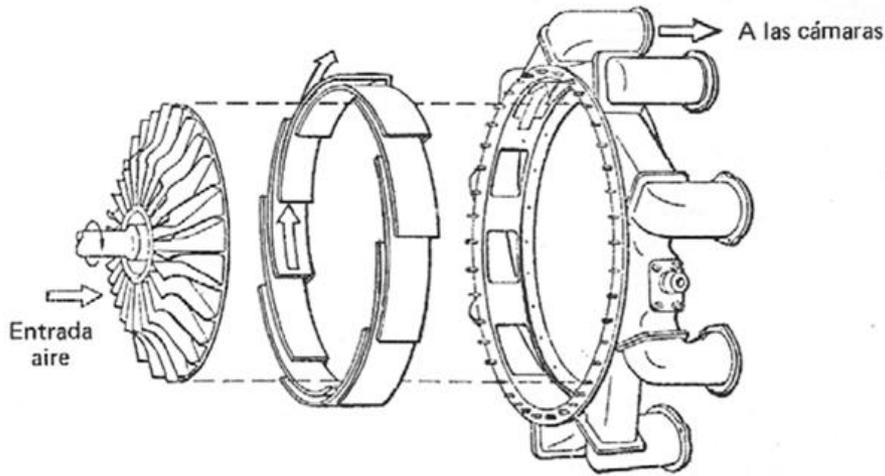


Supersonic Condition

El Conducto de Entrada variable de cuña móvil decelera el flujo de aire supersónico hasta una velocidad subsónica, forzándole a fluir a través de una serie de ondas de choque oblicuas y finalmente a través de una onda de choque normal.



COMPRESOR CENTRÍFUGO

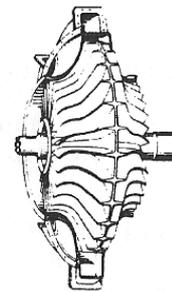


Rotor

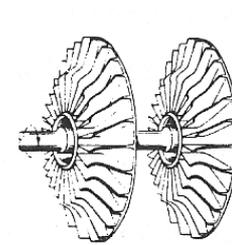
Difusor

Colector

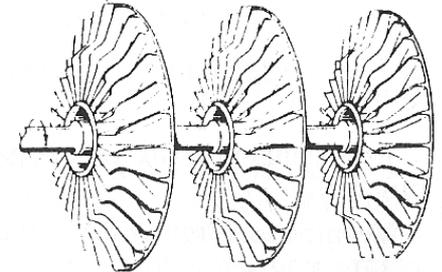
Componentes del compresor centrífugo.



Doble cara.

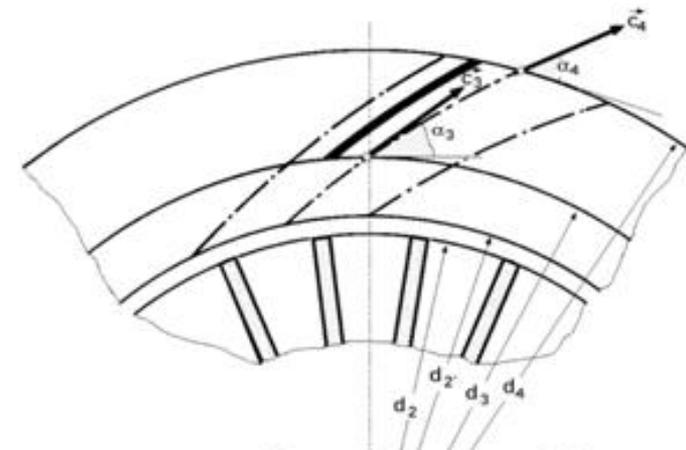
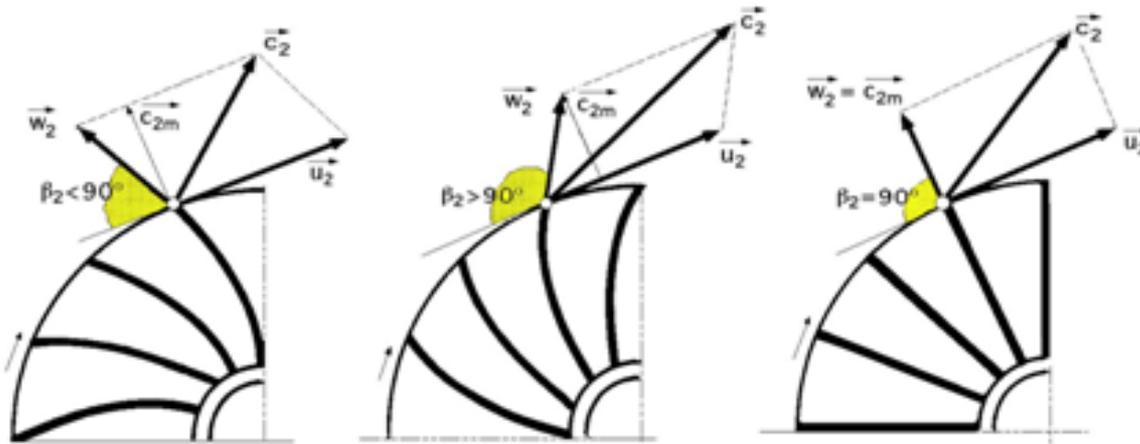


Doble compresor



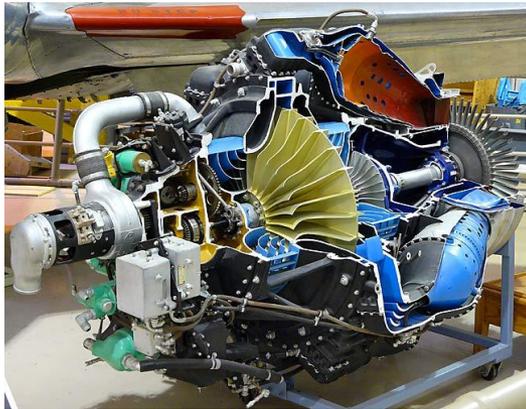
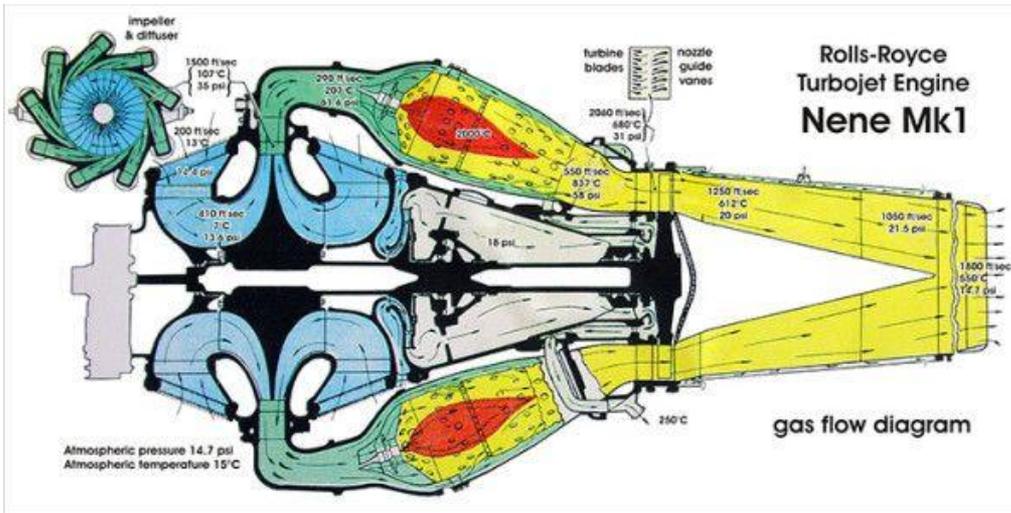
Triple compresor.

"Impellers" de distintos tipos de compresores centrífugos.

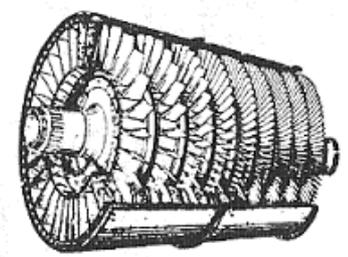
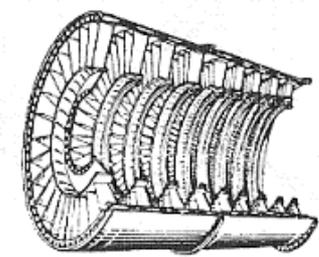
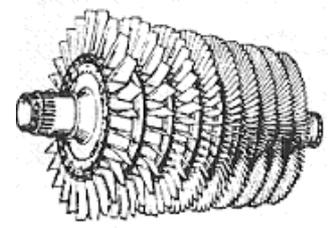
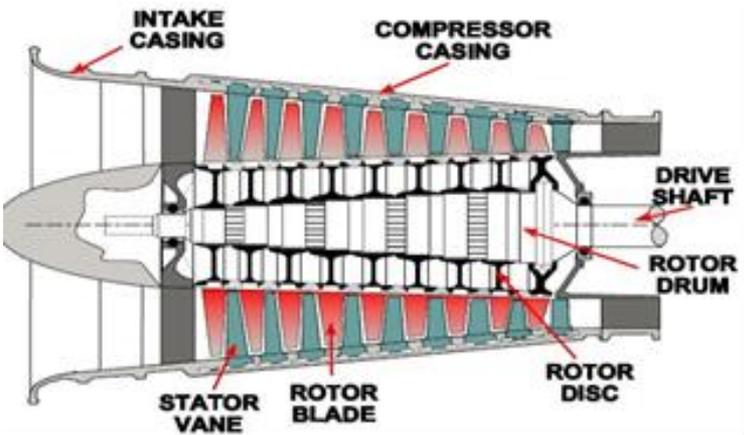


Corona directriz con álabes

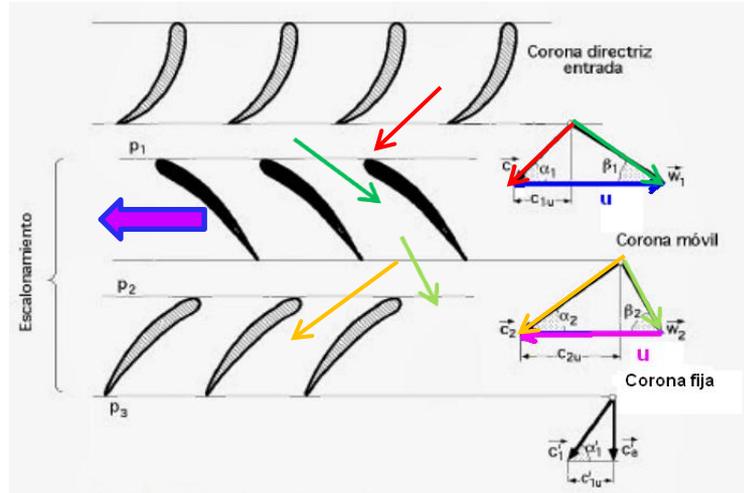
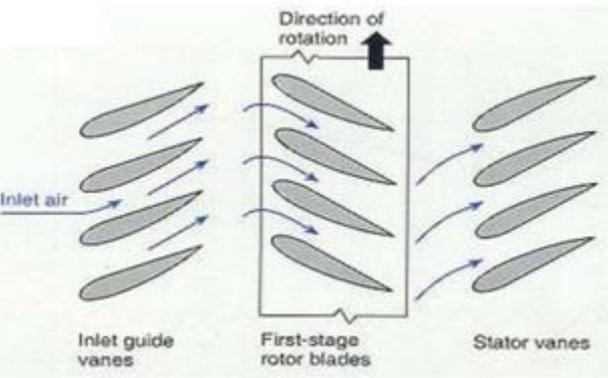
COMPRESOR CENTRÍFUGO



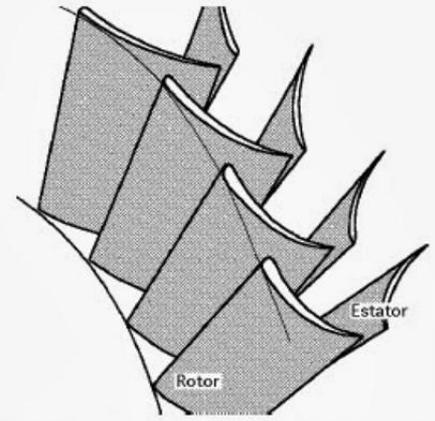
COMPRESOR AXIAL



Componentes del compresor axial.

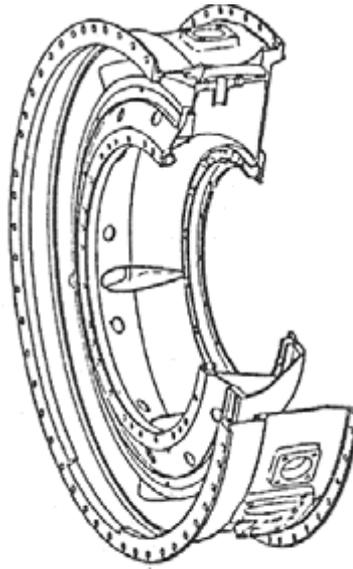


Escalonamiento de un turbocompresor axial y triángulos de velocidades

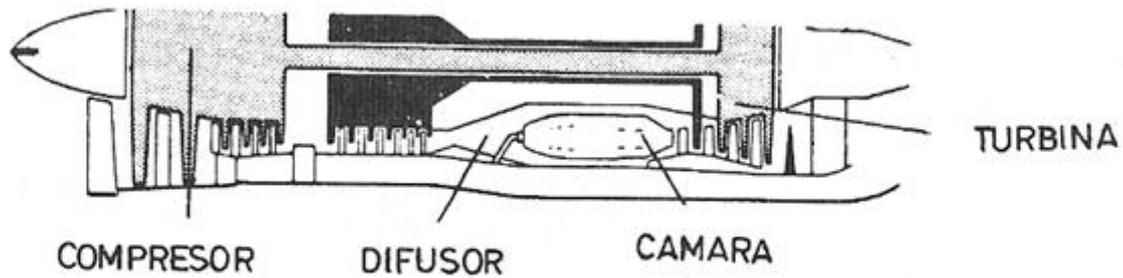


Corona móvil y distribuidor de álabes guía en un compresor axial

DIFUSOR



Difusor post-compresor.



COMPRESOR

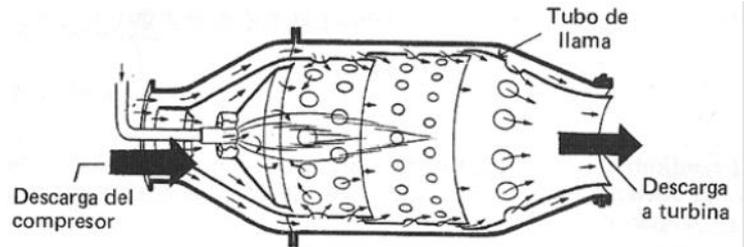
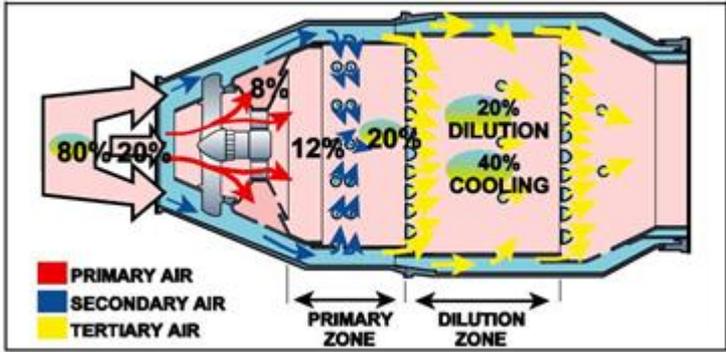
DIFUSOR

CAMARA

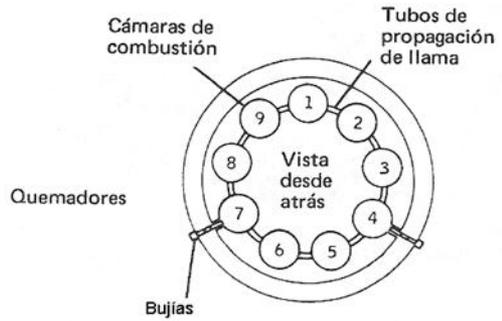
TURBINA

Difusor post-compresor (o difusor pre-cámaras).

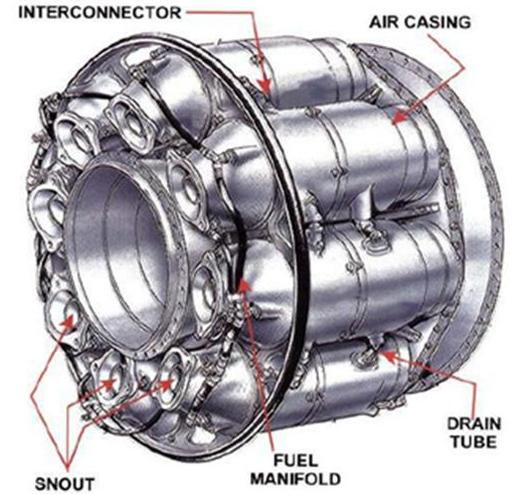
CÁMARA COMBUSTIÓN INDIVIDUAL



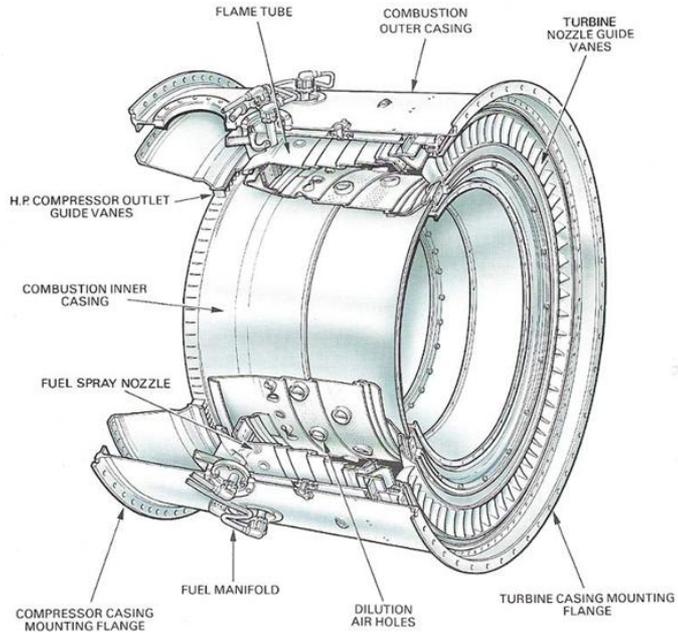
Cámara de combustión individual.



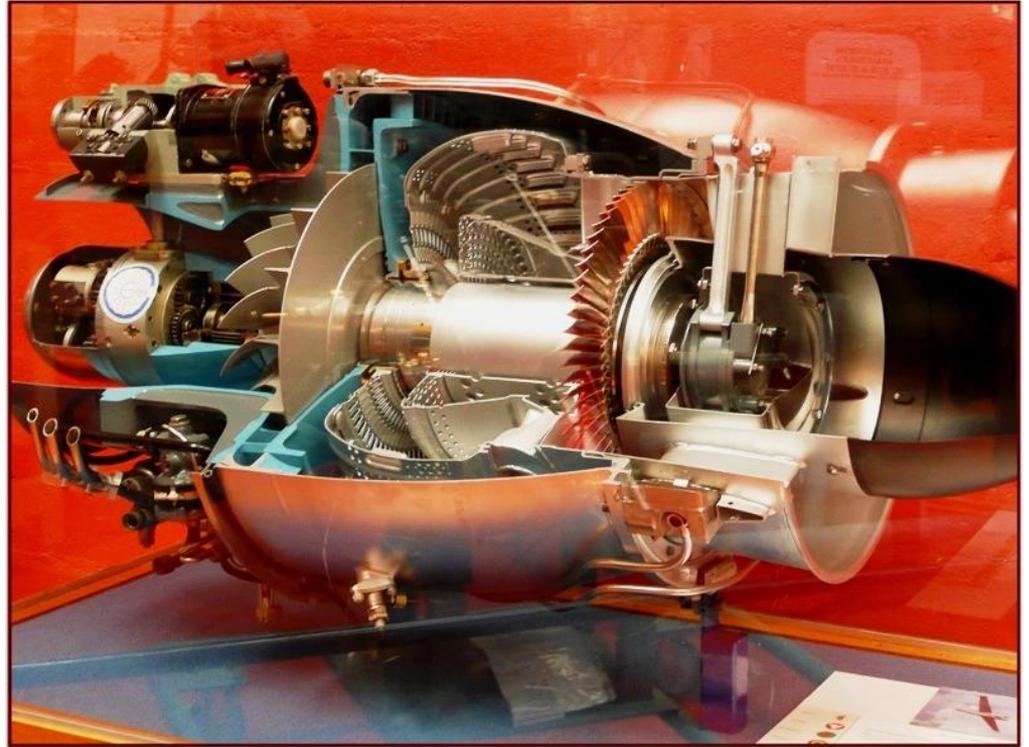
Disposición de cámaras individuales.



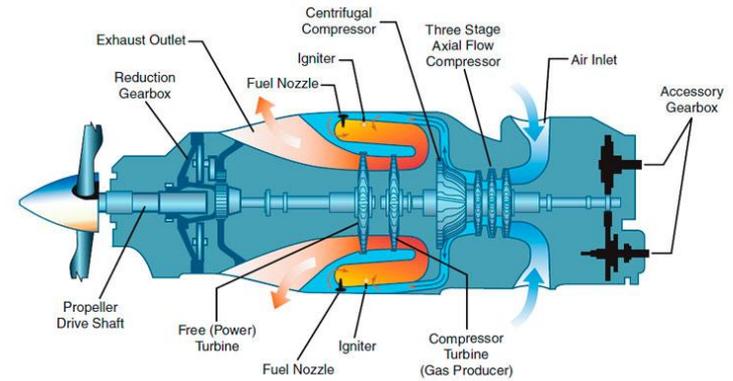
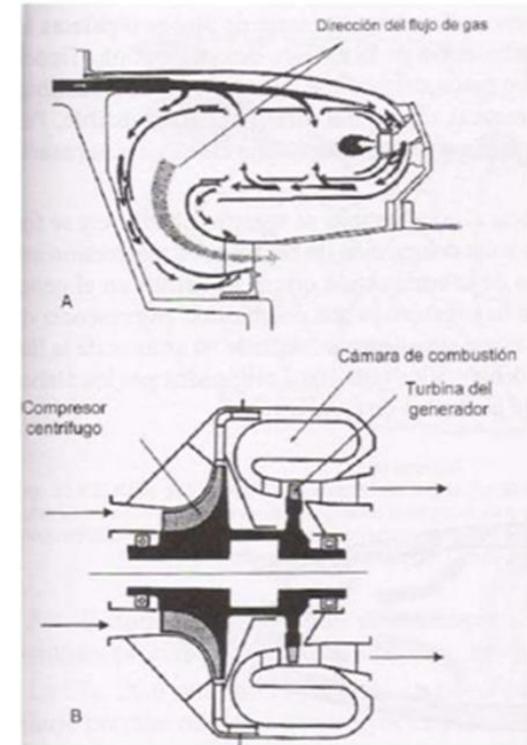
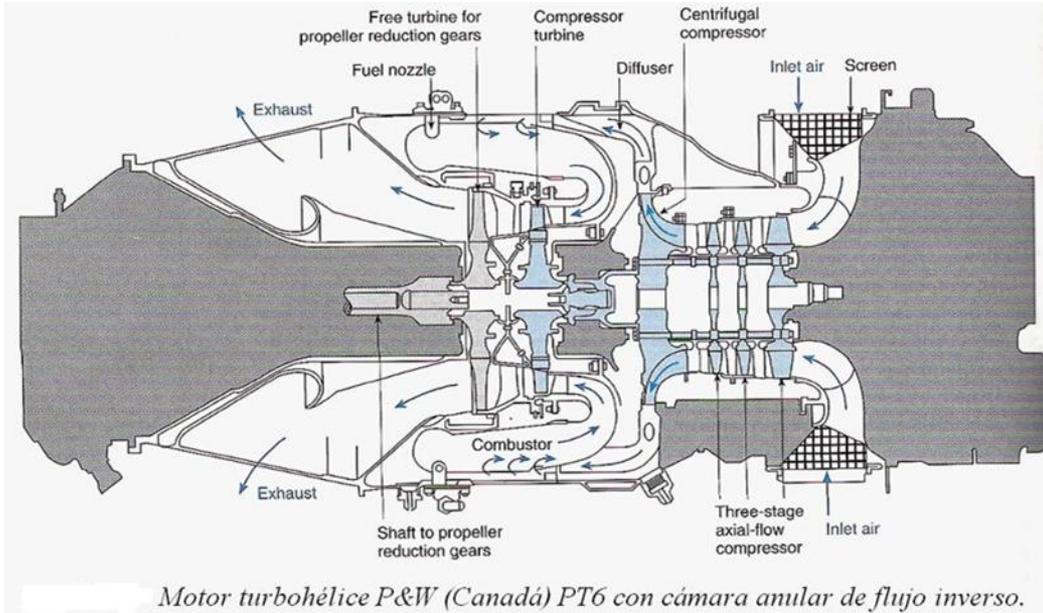
CÁMARA COMBUSTIÓN ANULAR



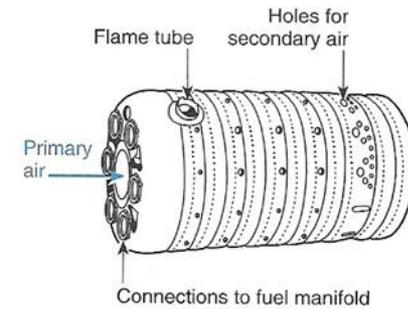
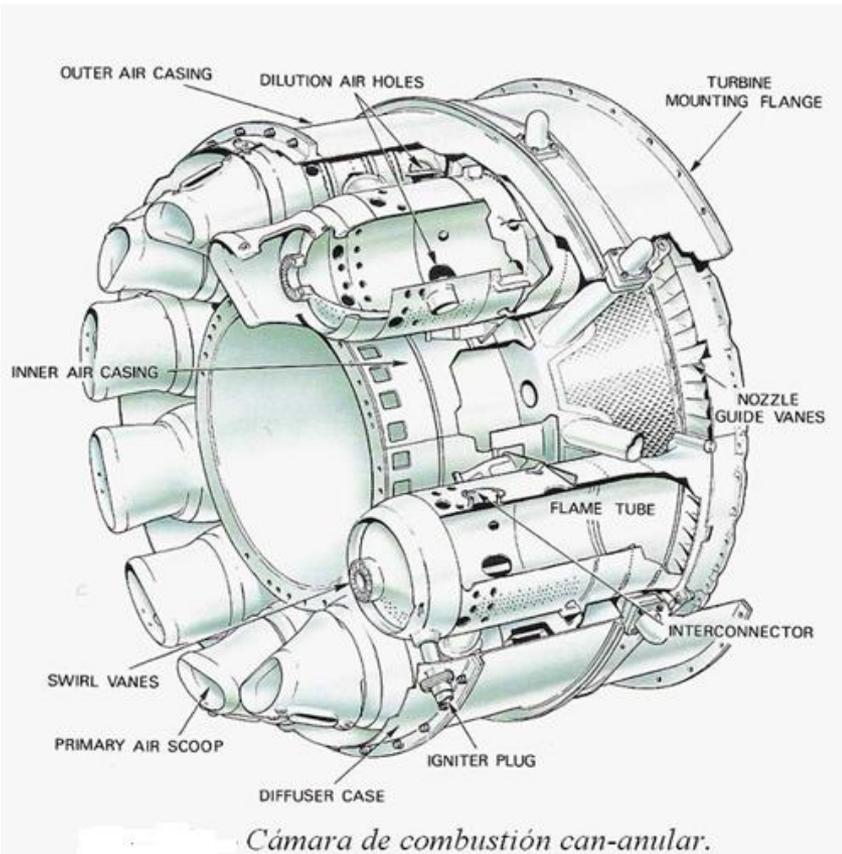
Cámara de combustión anular.



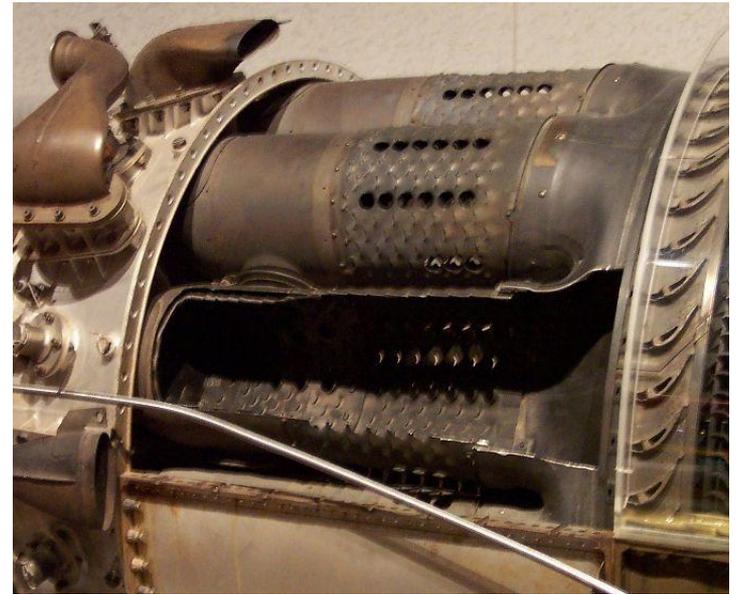
CÁMARA COMBUSTIÓN ANULAR FLUJO INVERSO



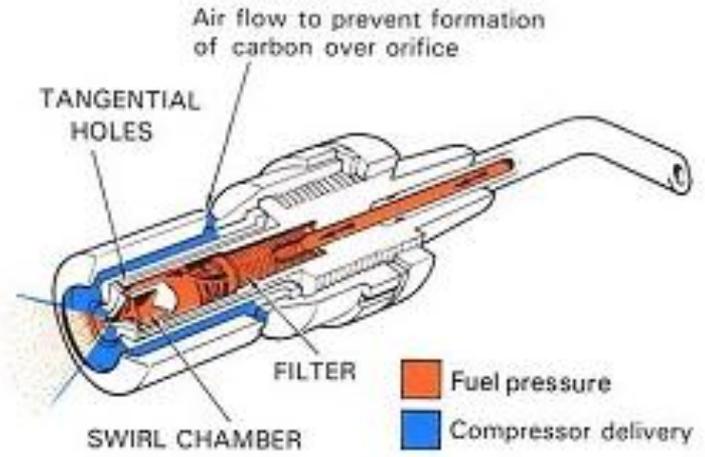
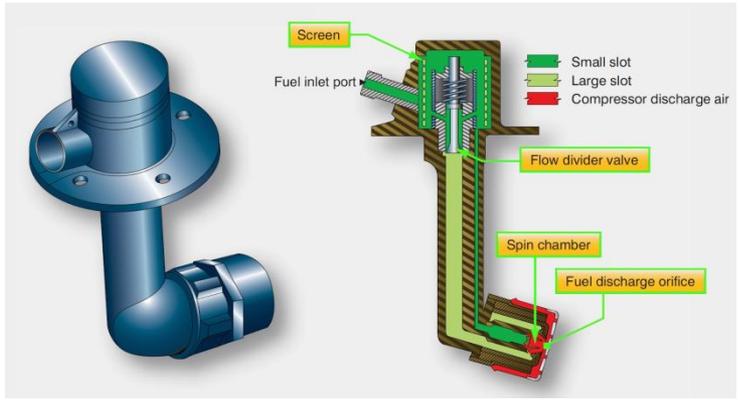
CÁMARA COMBUSTIÓN CAN ANULAR



Cámara individual de un conjunto de cámara can-anular.

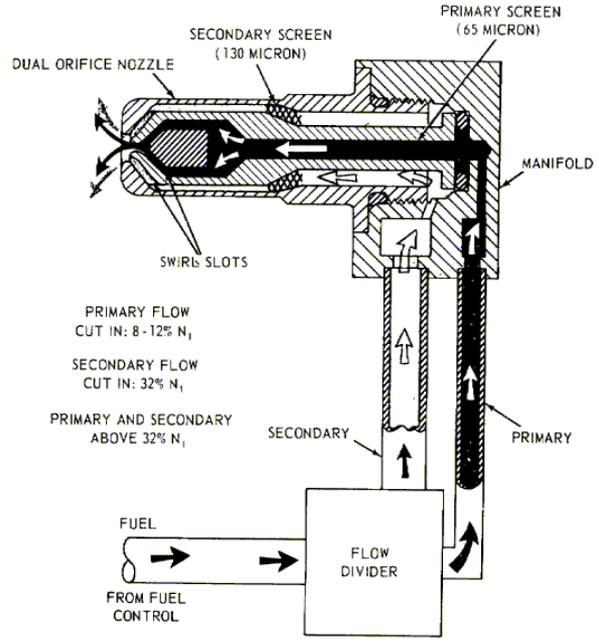


CÁMARA COMBUSTIÓN INYECTORES

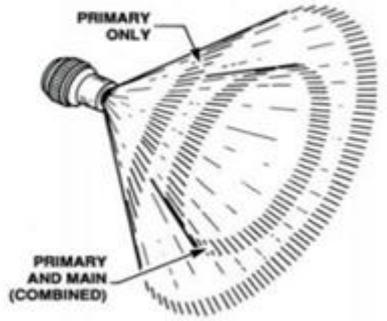
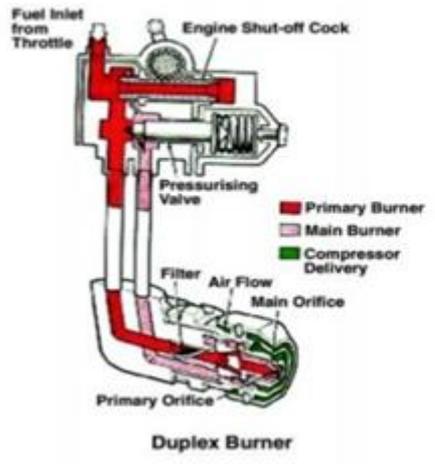


A Simplex fuel spray nozzle.

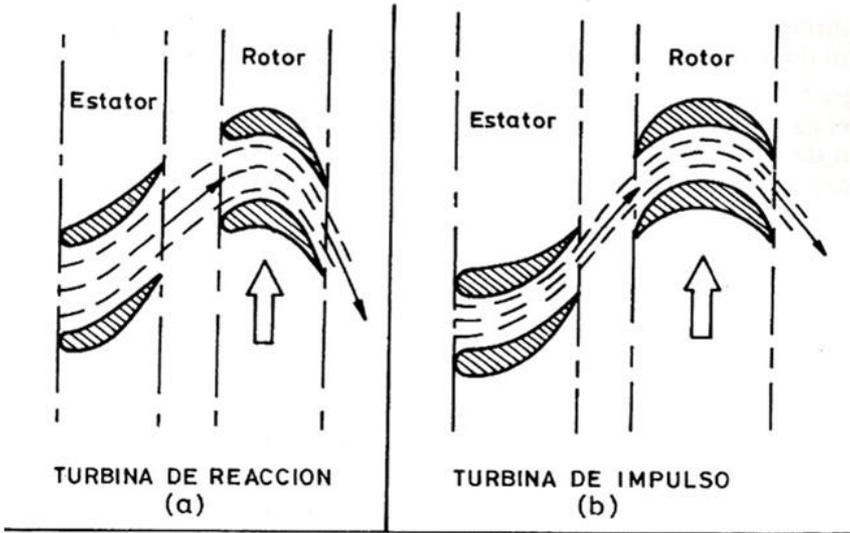
DUPE & DUPLEX



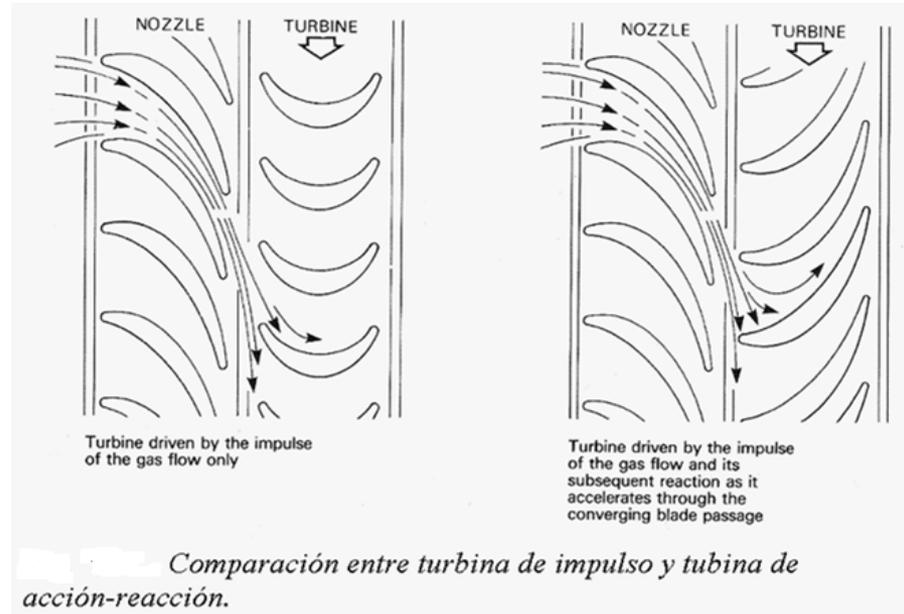
DUPE AND DUPLEX



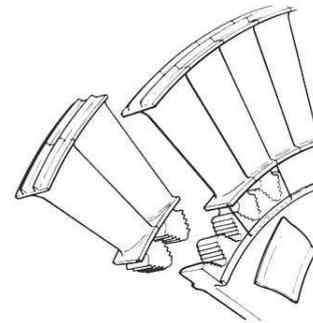
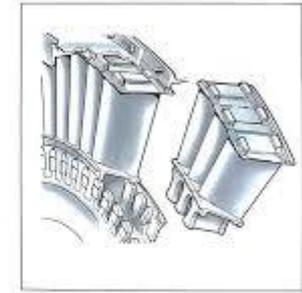
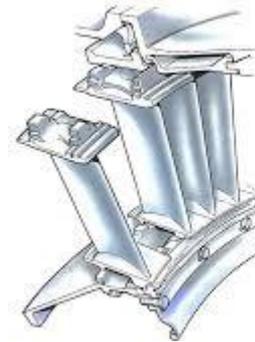
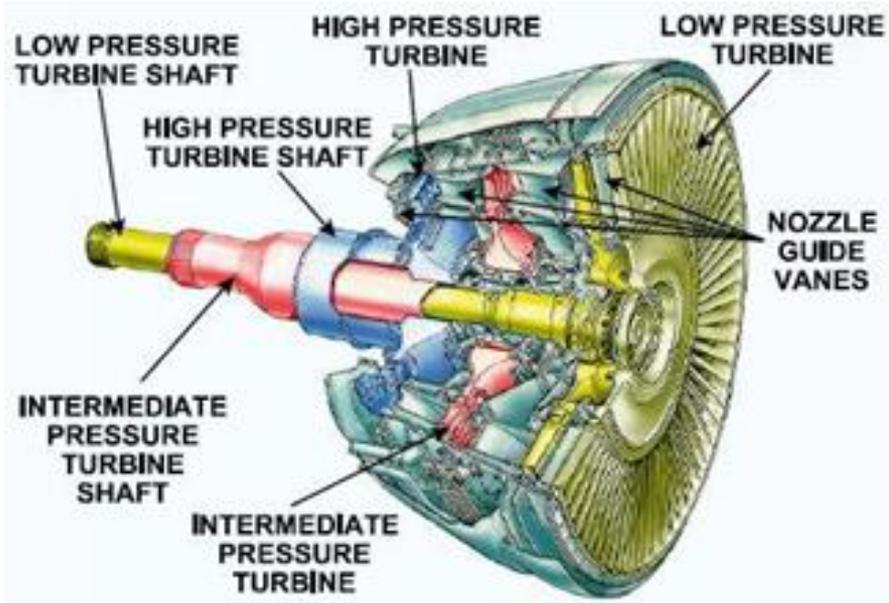
TURBINAS



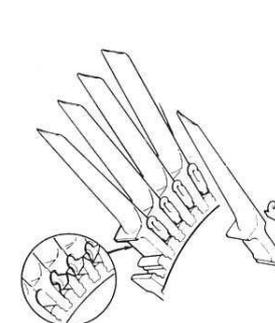
Turbinas de reacción y de impulso.



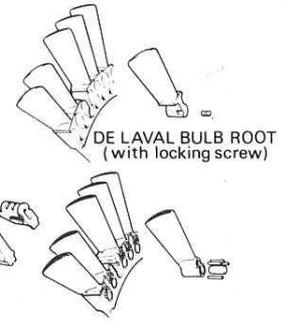
TURBINAS



FIR TREE ROOT (with locking plate)

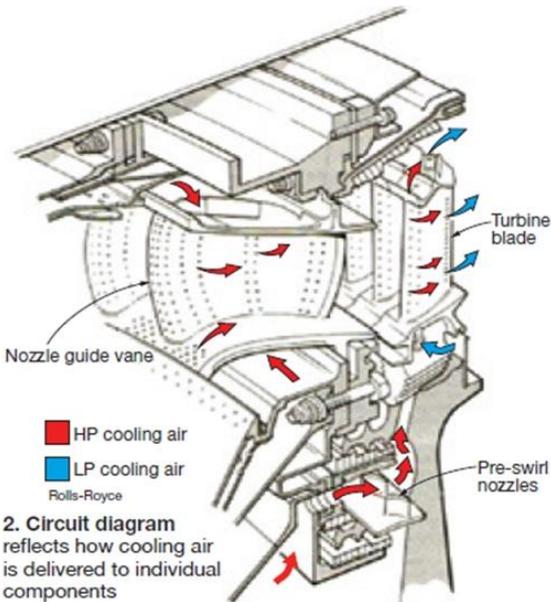


FIR TREE ROOT (with shank seals)

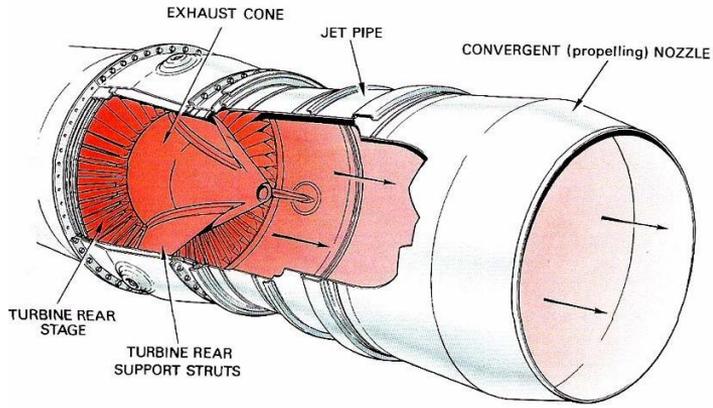


B.M.W. HOLLOW BLADE (with retaining pins)

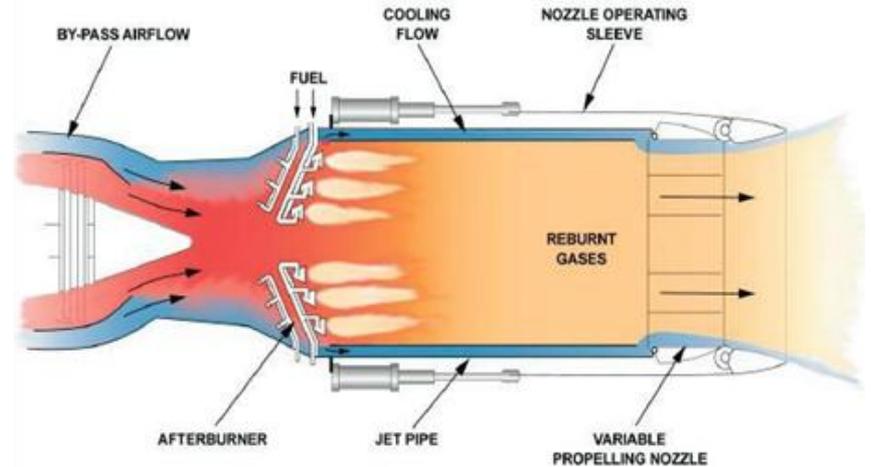
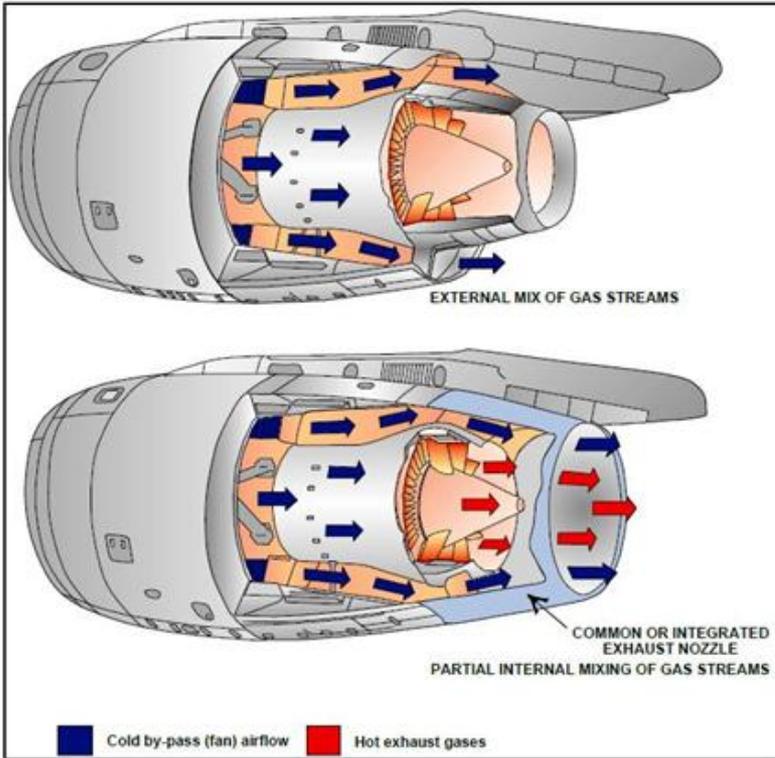
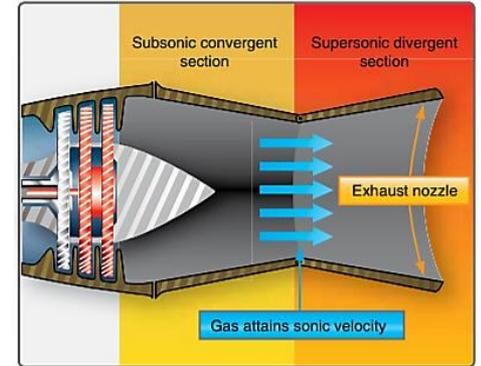
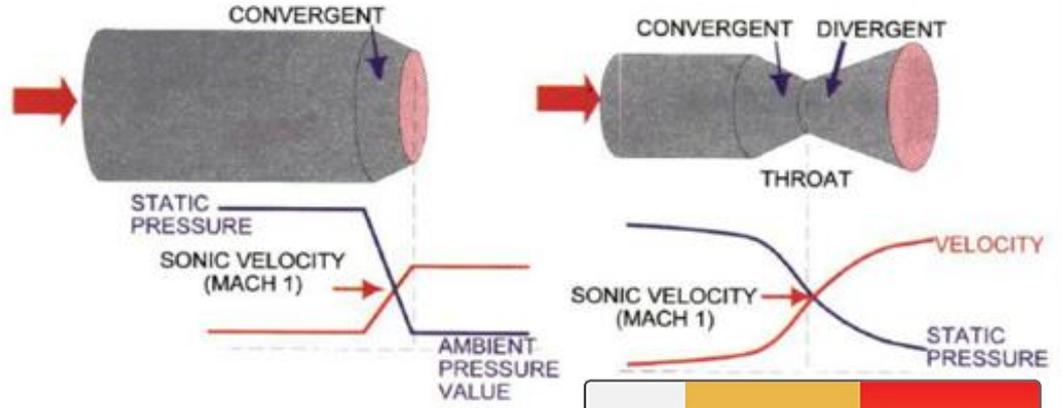
DE LAVAL BULB ROOT (with locking screw)



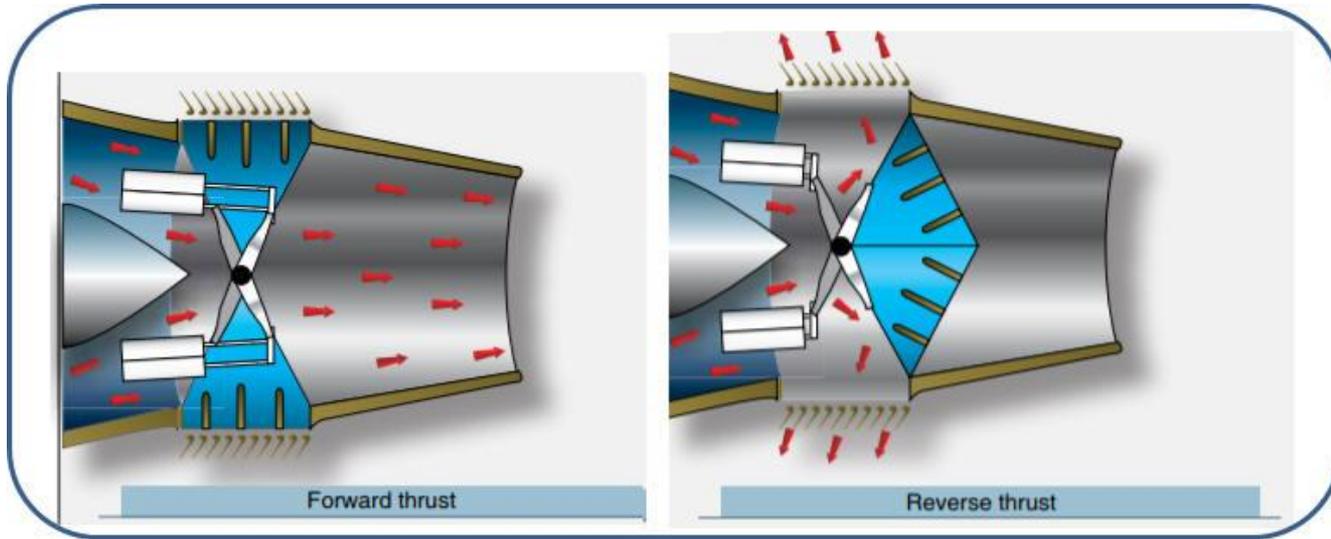
DIFUSOR



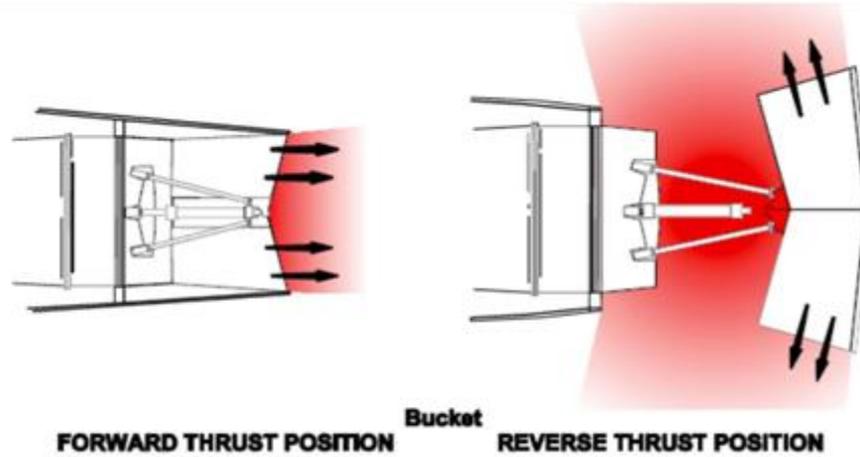
Disposición básica del sistema de escape (tobera)



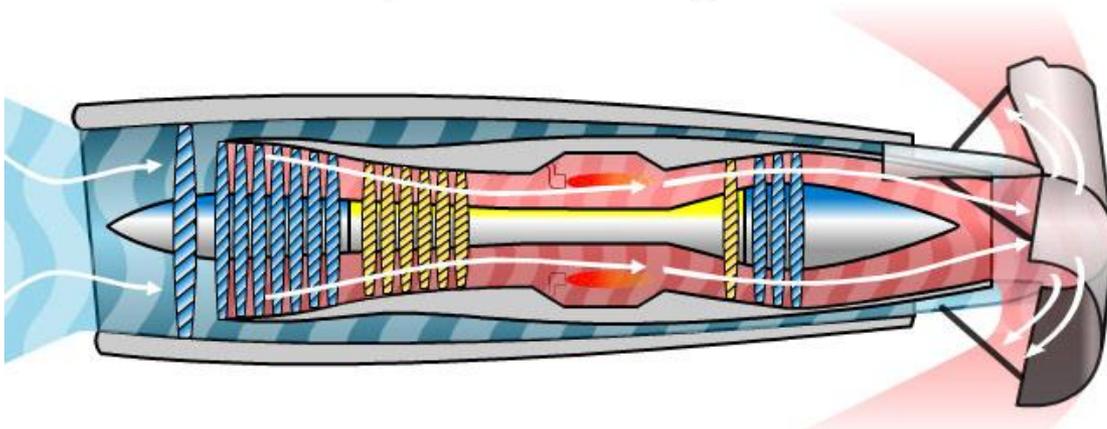
DIFUSOR REVERSOR



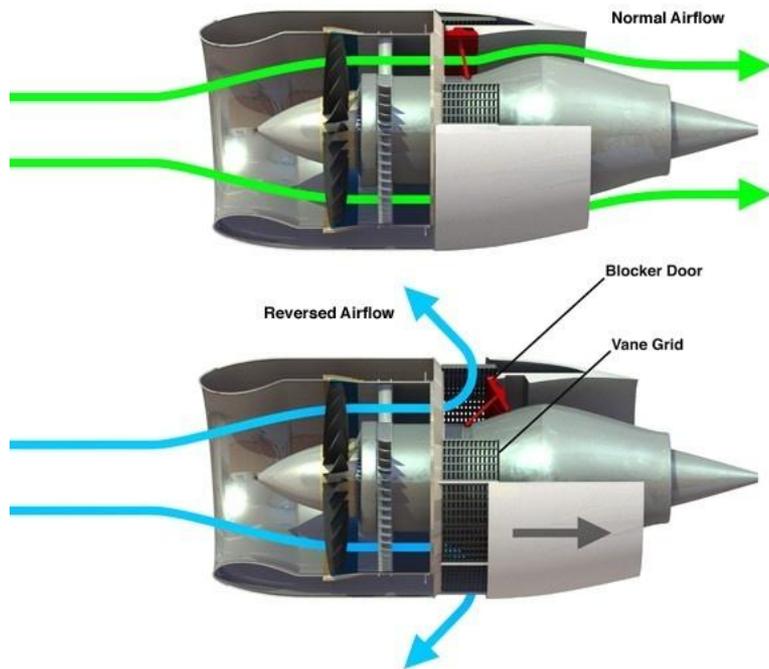
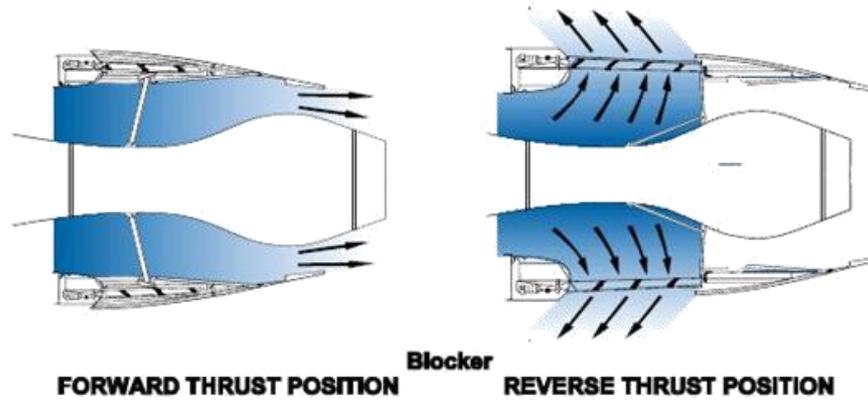
DIFUSOR REVERSOR



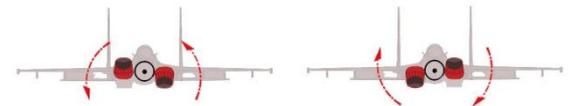
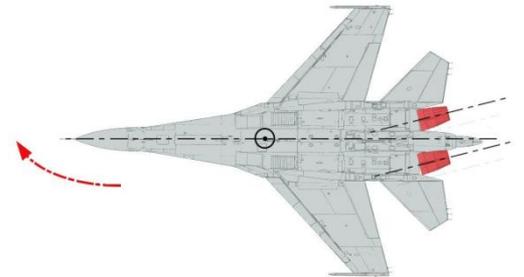
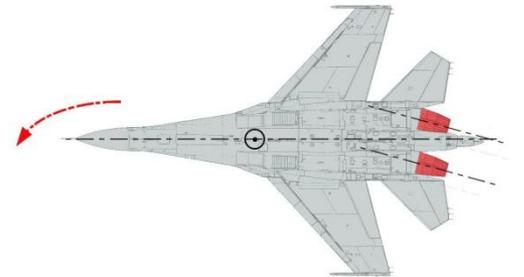
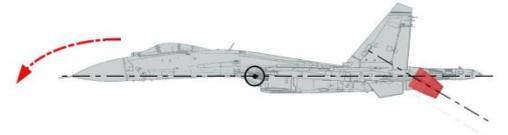
Pratt & Whitney JT8D-9A clamshell-type thrust reversers



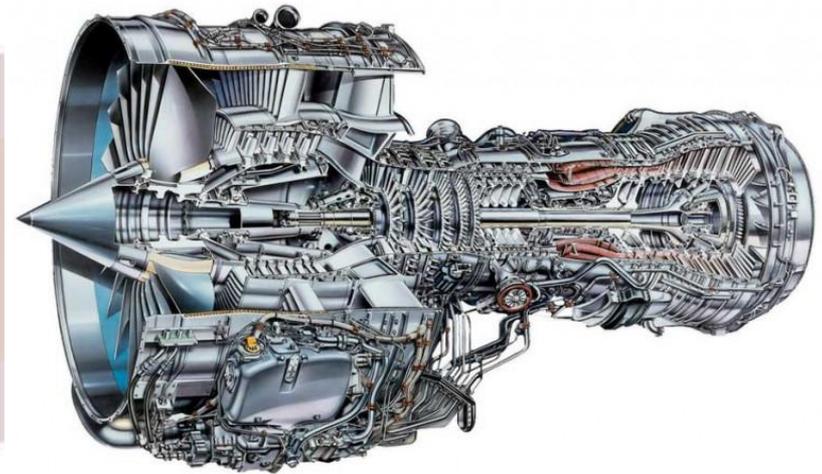
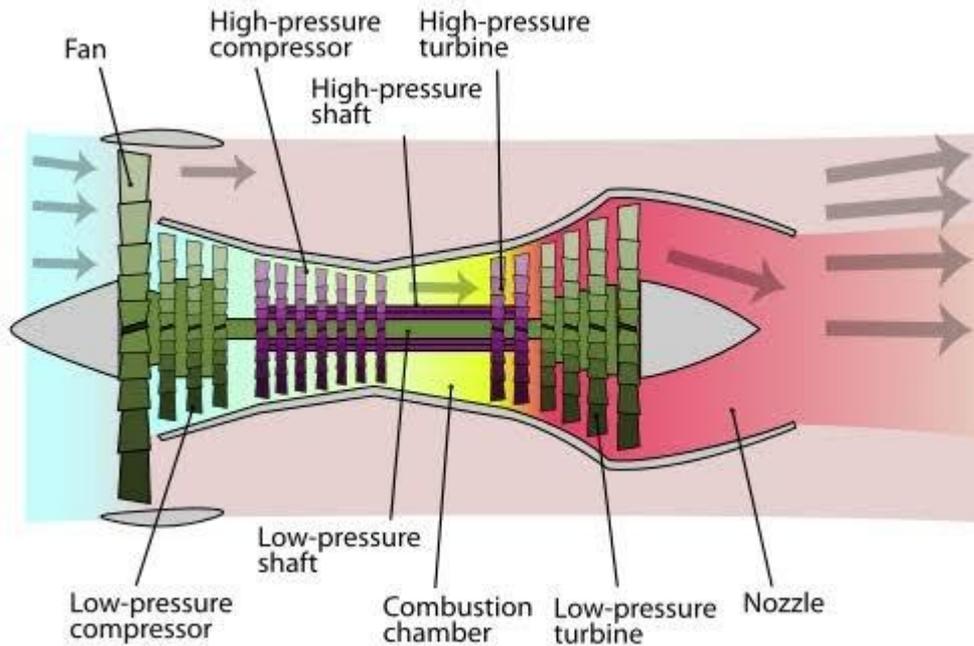
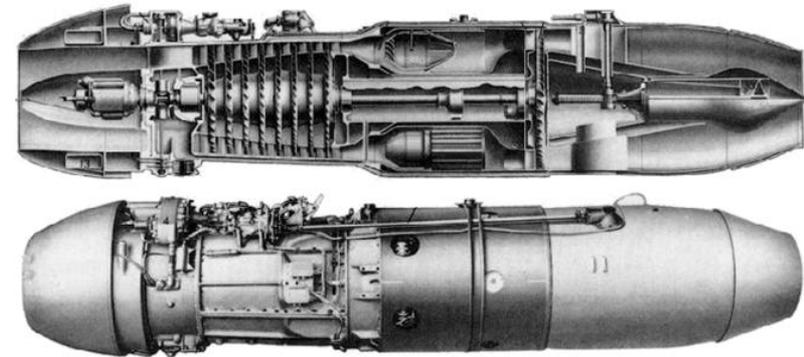
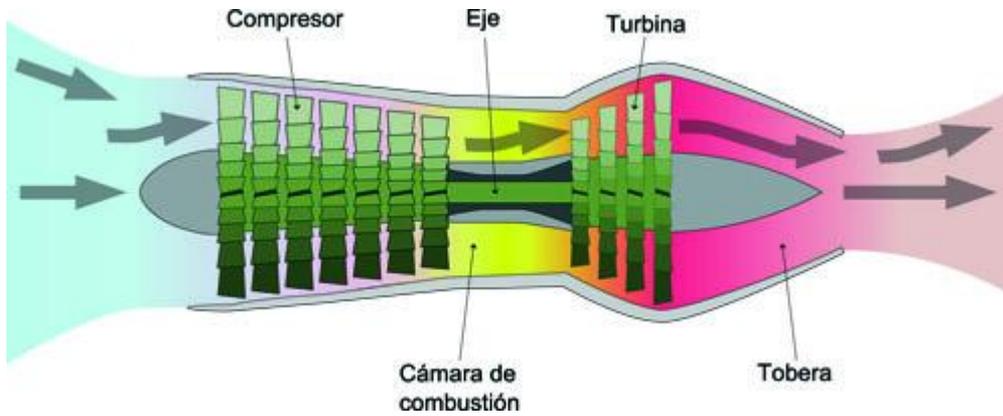
DIFUSOR REVERSOR



DIFUSOR EMPUJE VECTORIAL

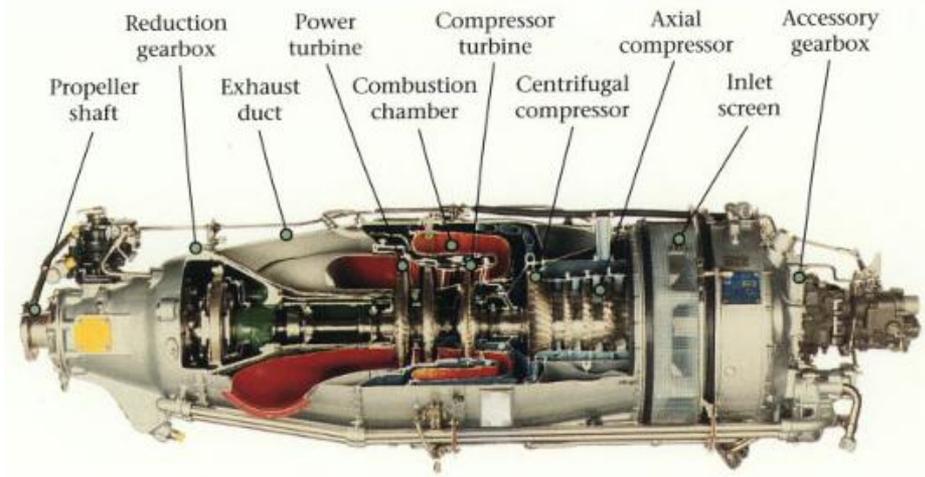
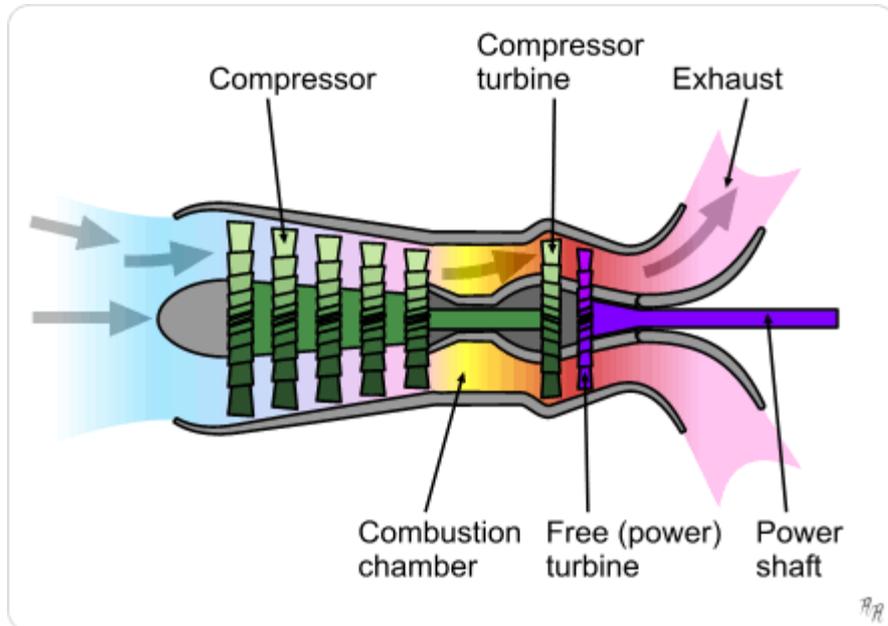
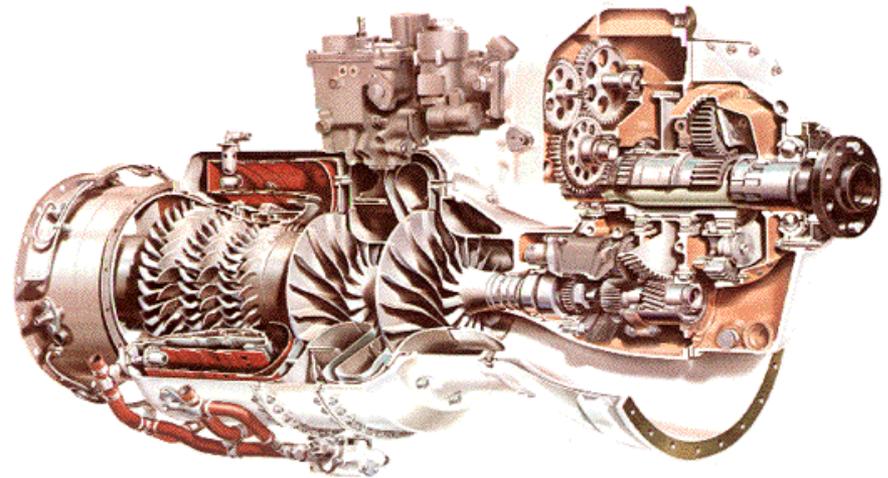
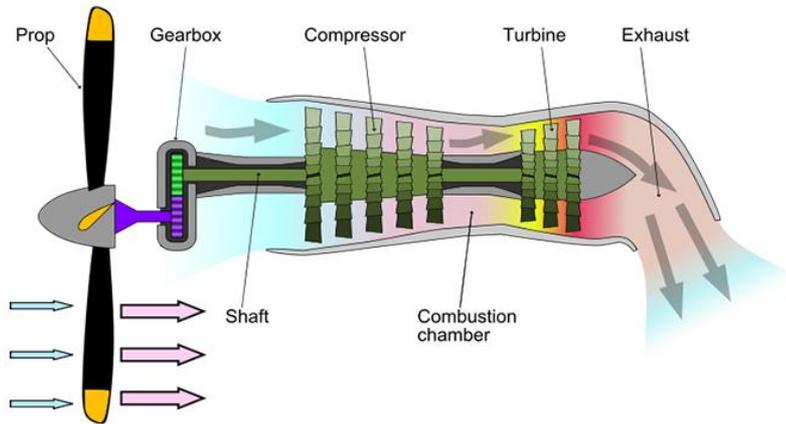


MOTORES A REACCIÓN

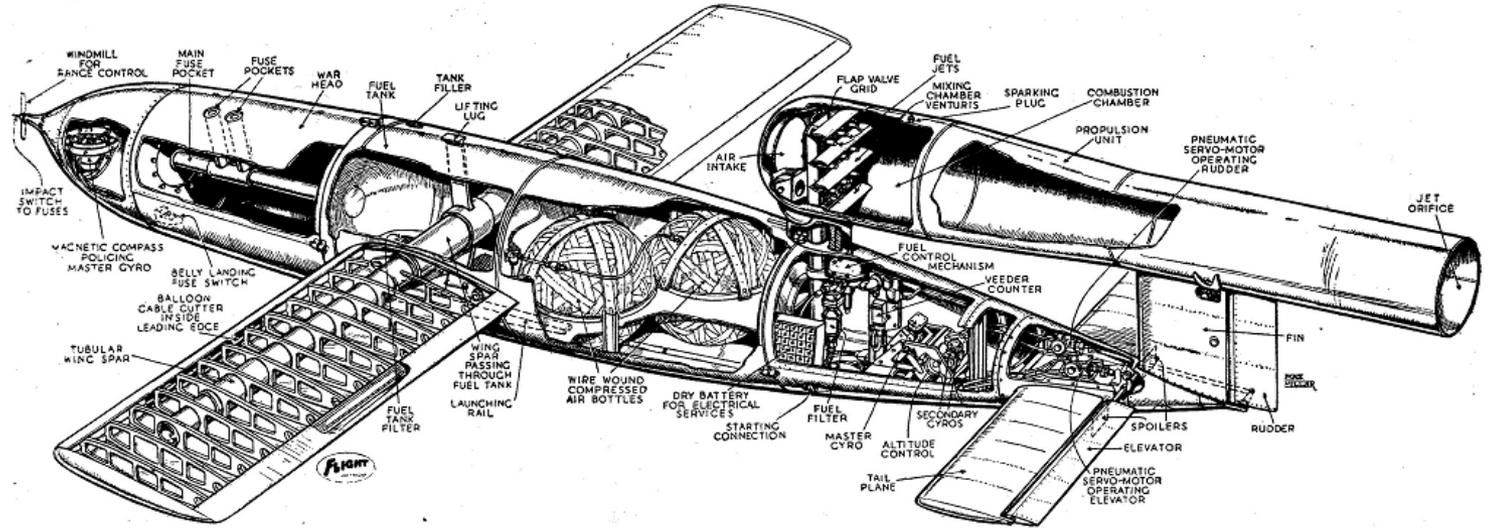
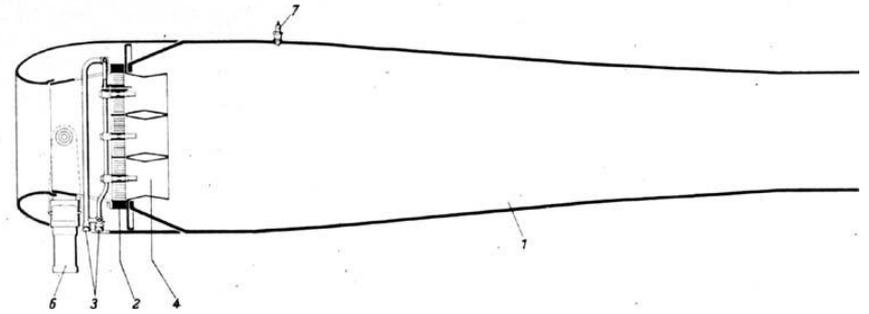
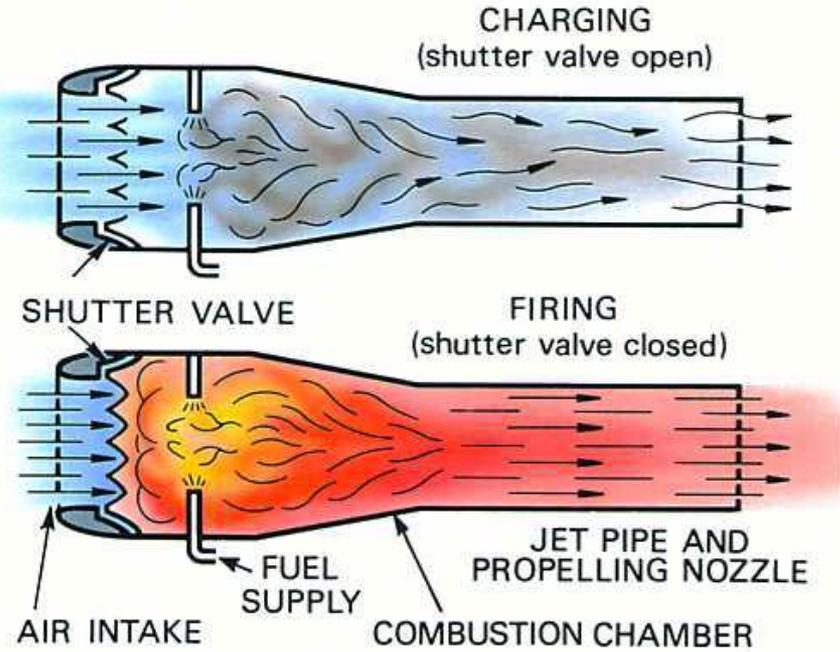


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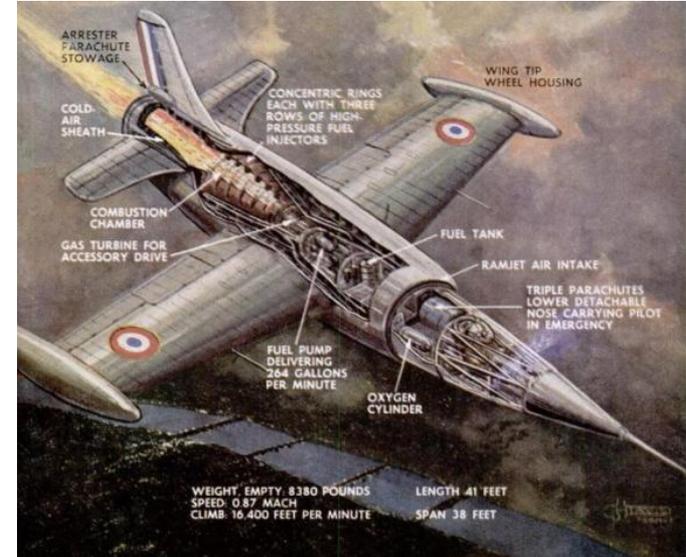
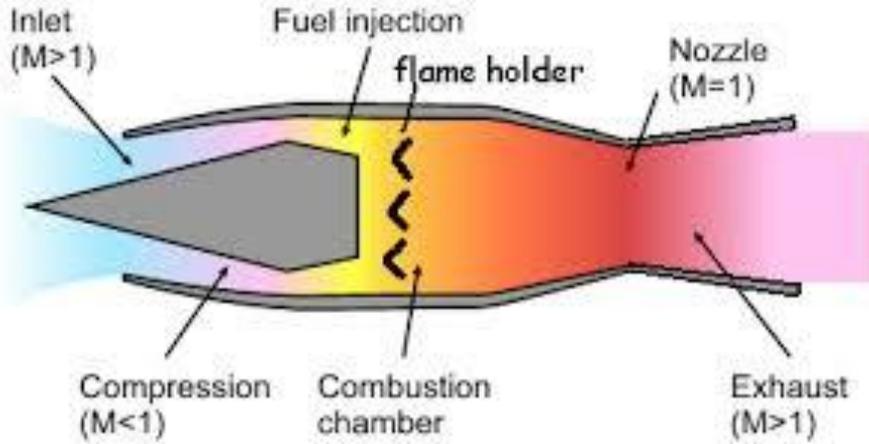
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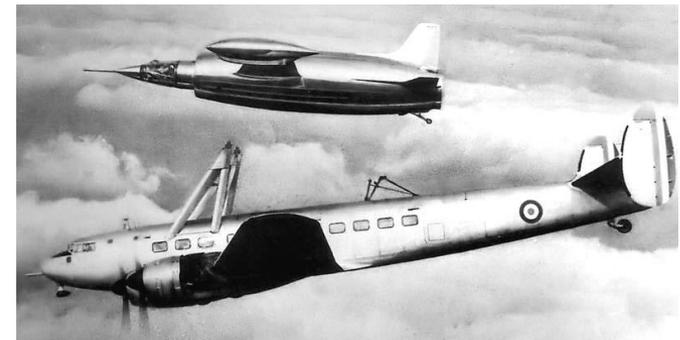
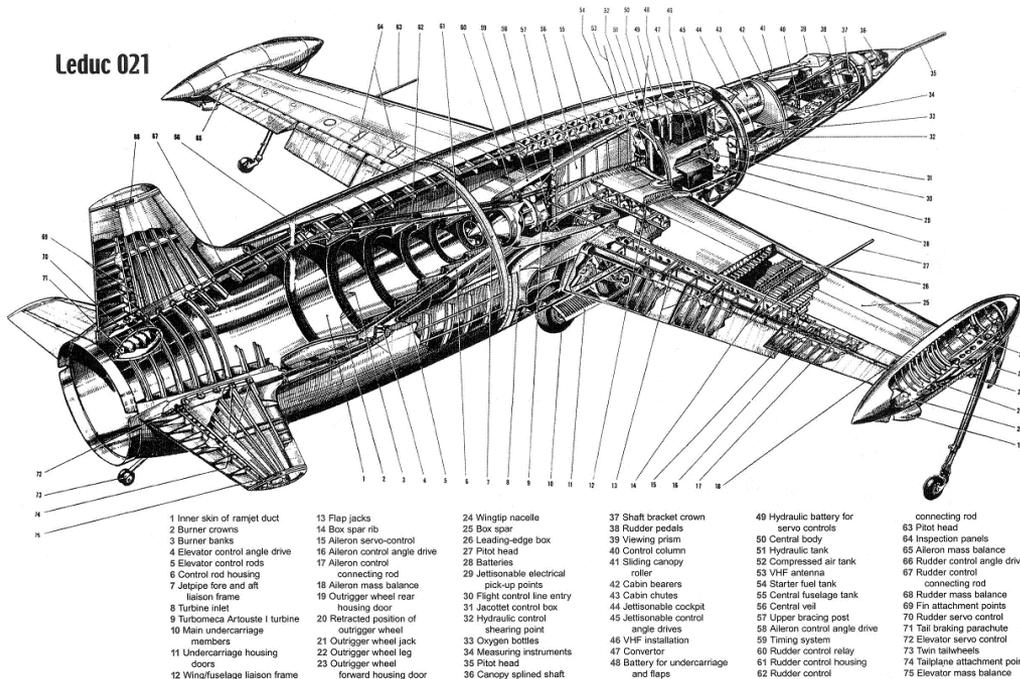
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