

## Gas Turbine - Mechanical Drive

This advanced aeroderivative gas turbine, combined with proven power turbines, compressors and packaging, is considered the most successful gas turbine package serving the oil and gas industry today. Available for both mechanical drive and electric power generation applications, the turbine package is capable of delivering up to 40,000 shaft HP or 32 MW base load electrical output. Each engine is serviced by an integrated lube oil and start console. The console features two (duplex) custom designed multi stage gerotor pumps developed by Cascon.



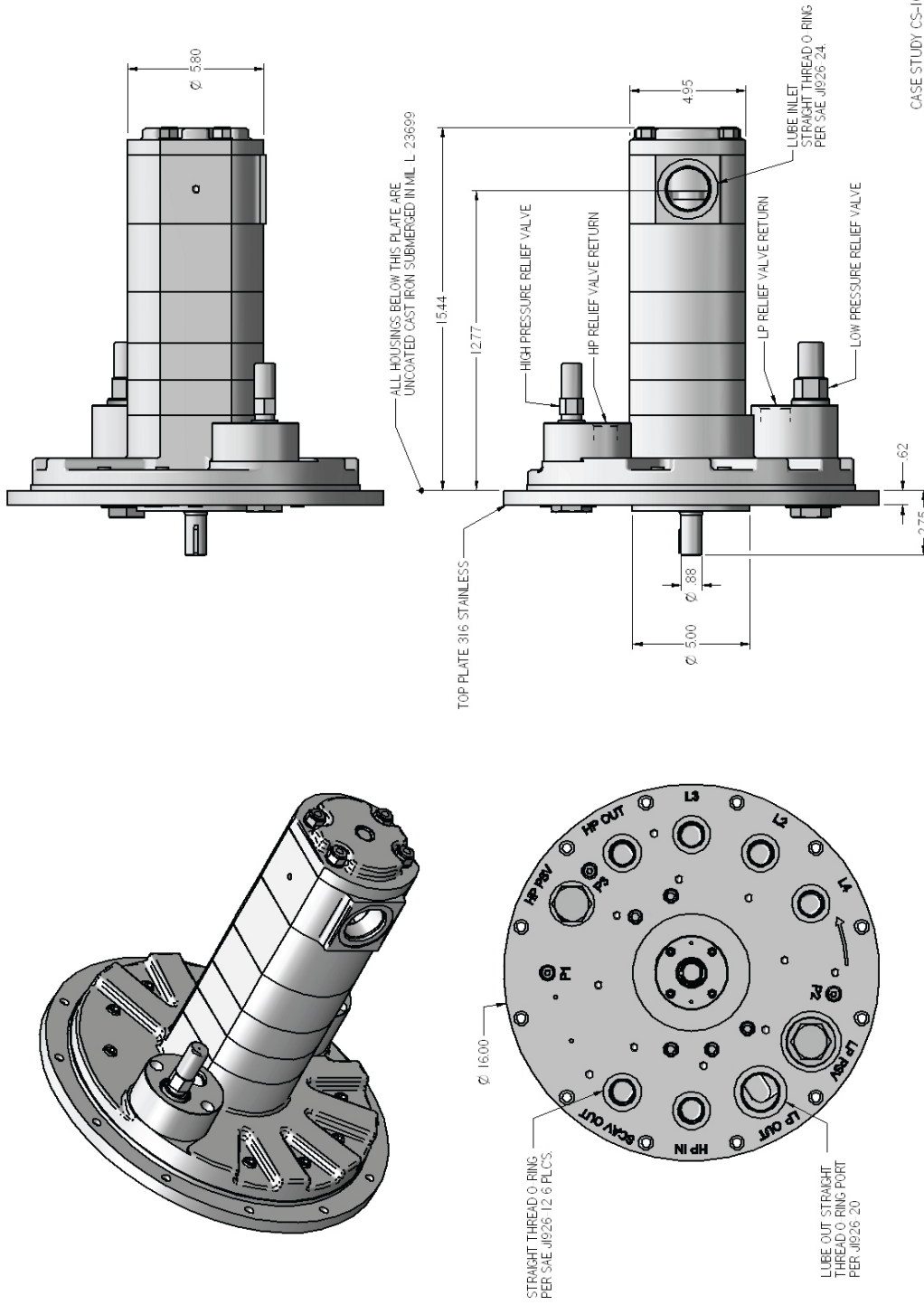
### Pump Description:

The multi-circuit gerotor pump assembly provides five independent pumping functions; oil supply for gas generator lubrication, high pressure oil for variable inlet guide vane actuation, and independent scavenge to each of three engine bearing compartments. The pump installs vertically into the supply oil reservoir, with the pump housings submerged in the oil and the drive motor mounted directly above. A 1" thick 316 SS port plate located at the drive end of the pump provides structural support for the pump and drive motor, mounting holes and a pilot diameter for the motor adaptor, a machined bore to contain the field replaceable shaft seal assembly, and a series of SAE straight thread o-ring ports for interconnect to each of the individual pump circuits. Flow paths that are integral to the cast, ductile iron, pump housings route oil from the individual pump rotor to the stainless port plate. Pressure relief valves, for the lube supply and hydraulic control circuits, are also integrated directly into the pump housings, and accessible from the top port plate.

### Selected Performance Data:

Fluid	Synthetic ester based oils
Lube Circuit Flow	33 GPM @ 240 psid
Front Bearing Scav	5 GPM @ 20 psid
Center Bearing Scav	22 GPM @ 20 psid
Rear Bearing Scav	22 GPM @ 20 psid
VIGV Circuit	9 GPM @ 500 psid
Ambient Temp Range	-45 degF to +250 degF
Operating Speed	3600 rpm
Lube Relief Valve	Integral - 350 psid crack
VIGV Relief Valve	Integral - 1000 psid crack
MTBO	20,000 hours





CASE STUDY CS-102 LUBE & SCAVENGE PUMP