

## Required Items

The following data must be made available by the customer, before work commences on the project:

- Driver
  - Engine
    - Mass-Elastic data
    - Fourier forcing function
    - Shaft drawing
    - Material specification to include  $S_u$  and  $S_y$
    - Viscous damper
    - Flywheel / Fan, if applicable
  - Electric Motor
    - VFD or fixed speed
      - VFD harmonics (If VFD controlled)
    - Mass-Elastic data (Rotor inertia and shaft stiffness)
    - Torque versus speed including start-up
    - Shaft drawing
    - Material specification to include  $S_u$  and  $S_y$
    - Fan, if applicable
- Load
  - Operating conditions
    - Speed range
    - Operating speed
  - Mass-Elastic data
  - Fourier forcing data
  - Shaft drawing
  - Material specification to include  $S_u$  and  $S_y$
  - Rotating equipment (Screw Compress, Centrifugal Pump, etc.) specifics
    - Rotor inertia  $WR^2$
    - Rotor shaft stiffness
    - Drive stub drawing (if available) – detail of keyway
  - Reciprocating equipment specifics
    - Stroke
    - Piston sizes
    - Connecting rod lengths
- Coupling
  - Mass-Elastic data
  - Torque limits (Peak overload and fatigue torque)
- Gear system (If included in the system)
  - Mass-Elastic data
  - Drawing indicating materials of construction and the following:
    - Gear ratio
    - Number of gear teeth
    - Gear pressure angle
- Flywheel (If included in the system)
  - Mass-Elastic data
  - Drawing indicating material of construction:

## Helpful Items

The following data is considered helpful and it is only required in some circumstances:

- Manufacturer specific equipment file (eg. Ariel . run file, etc.)