New or revamped processes of the power plant might create a demand for more pressure capacity of the fan. For a single stage fan a method of meeting the new demands is to upgrade it to a two stage fan.

Compared to installing a brand new fan the savings are considerable as several existing parts can be reused:

- some spare parts
- the regulating hub
- the duct work on either the suction or the pressure side
- some of the instrumentation
- spare parts on stock

Many Howden single stage fans can be upgraded provided that the dimensions of the existing foundation are suitable.

For optimum safety it must be secured that the foundation meets the Howden requirements of foundation stiffness and frequency.

Let Howden evaluate the fan and its foundation to give you an overview of which parts to renew and which to preserve.

**Example**

The red curve on Fig. 1 shows the performance of a two stage fan and the black curve the performance of a single stage fan - both provided with the same hub and impeller size and the same type of high pressure profile blades. It is easy to see that the pressure capacity is doubled.