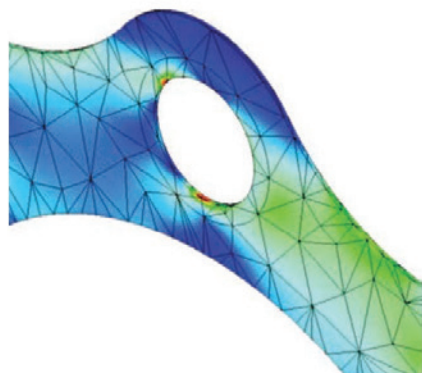


Couplings for pumps & turbo-compressors

1,000 cubic metres of air per second, 10,000 revolutions per minute, 500 bar pressure – some machines can degrade operating at such figures, unless they are equipped with the right drive components.

Year after year, compressors are developed to handle higher speeds and capacities. At the same time, they can also handle gases at higher pressures and densities, so that the power input is ever increasing and designed into a smaller and higher speed package.



FEM-Optimized lamina shape.

The hydraulic considerations needed to take into account when selecting the correct pump include: system design,

flow rate, system resistance and duty point.

Shock, vibration, energy dissipation and bearing loading should be kept at a minimum for the pump to have a long, problem-free operating life.

Of course, compromises exist due to economic factors; after all, there isn't an ideal pump for every application.

Hence, the pressure on coupling manufacturers has also increased in order to provide a solution to transmit power from the driver to the pump/compressor.

All this has to be done whilst compensating for a finite amount of misalignment; angular, radial and axial.

The household duty of the coupling does not stop there. Very often with applications involving motor and gear drives, there are high frequency torsional impulses produced by the driver. It is the job of the coupling to prevent the transmission of these torsional impulses to the compressor as the impellers are already highly stressed.

Along with any pump/compressor

system, the coupling should also have a long life with low maintenance requirements.

Since a coupling has some mass, it tends to lower the critical speed of the overall system. Therefore, it should be designed in such a way as to lower the critical speed by the lowest possible amount. It should be lightweight and of course, low in cost.

Windage and noise are two other factors that need to be accounted for. Older coupling designs produce windage and noise which often causes a nuisance because it sucks the oil from the bearings adjacent to it.

Coupling designs must combine maximum stiffness with the highest possible flexibility to make them ideal for fast-running drives whether it be gas and steam turbines, high speed pump drives, turbo compressors, boiler speed pumps and generators.

Whatever the application, Deanquip are your partners for high speed couplings.



Made for Motion



Made-to-measure!

Every high-performance coupling of KTR is developed specifically for the use on high-speed drive trains and manufactured accurately to the customer's requests by us. The new RIGIFLEX®-HP operates competently and reliably even with circumferential speeds up to 720 km/h or 25.000 RPM.

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