

→ KTI Project Report No.5

**SUSPENSION OF TWO
TRANSFER PRESSES FOR VW**

- Customer** → Volkswagen Nutzfahrzeuge
- Location** → Hannover, Germany
- Year** → 2008
- KTI product** → spring support PWG with viscose safety damping
- Special feature** → Preliminary studies of vibration behaviour
Subsequent measurements of residual vibrations

In 2008, two new transfer presses, with a total pressing force of 2 x 20,000 kN were installed by the Spanish firm Fagor at Volkswagen Nutzfahrzeuge in Hanover. In order to fulfil the challenging requirements regarding reduction of vibrations by providing the optimum suspension system, KTI first of all carried out comprehensive technical studies of vibration behaviour.

On the basis of the findings, KTI spring supports of the PWG series with a vertical natural frequency of 4.6 Hz as well as a viscose safety damping with a Lehr's damping value of $D = 0.11$ were used. The total weight of the presses at 620 tons each is spread evenly on 4 bearing points.

The lower picture here shows the spring supports when installed. The load is absorbed by the helical compression springs, arranged between the top plate and the substructure of the spring supports. The viscose safety damping necessary for damping the movements is located in a container positioned in the middle between the springs. Subsequent measurement of residual vibrations confirmed that the required optimum reduction of vibrations had been achieved.



FAGOR Transfer press with a pressing force of 20,000 kN



KTI spring supports with a bearing capacity of 1,600 kN