

# Modules – Cam cover for commercial vehicles



## GENERAL FUNCTION

ElringKlinger's cam covers for commercial vehicles combine maximum functionality with minimum weight. Besides the main function of sealing towards the cylinder head the fully integrated ventilation system including oil separator are key functions of the complex cover modules.



## TECHNOLOGY

Cam covers are produced by injection molding of thermoplastics with various glass fiber contents. The material properties of thermoplastic allows multi functional integration by using different kind of welding processes. Furthermore, plenty of other components like fixation bolts, heat shields, insert mounts and gaskets can be assembled to the main body. The variety of different assembly processes allows to create a ready-to-assemble product with maximum integration.

### ▪ MULTI FUNCTIONAL INTEGRATION

The plastic injection process and physical properties of thermoplastics allow an easy multi functional integration compared to other technologies like aluminum die-casting. Furthermore, the injection molding process leads to a bigger freedom in designing specific structures.

### ▪ VENTILATION SYSTEM AS CORE TECHNOLOGY OF CAM COVERS

Due to the various integration possibilities the integrated ventilation system became the core technology of cam covers. The integrated oil separation system technology of ElringKlinger is developed to achieve an optimum performance and energy consumption ratio. (For further details about ElringKlinger's oil separation solutions please see fact sheet "Oil separation system".)



## HEAT RESISTANCE

A high temperature resistance is possible with the right material mixture. The combination of high-performance thermoplastics, sealing materials and the integration of in-house heat shields result in the practical use of plastic covers even under hot conditions.




## DESIGN

Beside technical functionality the cam cover can also be a design part of the engine. Different surface textures added by graining in combination with painting processes or an integration of exchangeable name plates, offer plenty of possibilities for designers.






## BENEFITS

### PRODUCT BENEFITS

-  High weight reduction potential
-  Multi functional integration (sealing, oil filler, mounts, fixation bolts, wire clips, various ventilation systems including oil separation, heat shielding)
-  Space saving by smallest wall thickness
  - Better NVH performance due to high damping factor
  - High dimensional accuracy
  - Easy assembly with low cycle time for customers

### MANUFACTURING PROCESS

-  No rework necessary
-  Short cycle times / high automatisaton
-  High process stability and repeatability



## ELRINGKLINGER – YOUR PARTNER FOR CAM COVER MODULES

Product Development (Design, Engineering and Simulation) – Process Development – Tool Shop – Tool Sampling/Prototyping – Testing – Change-Management – Series Production – Part Measurement



## YOUR CONTACT

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