CONNECTING RODS

Technical Sheet

GKN POWDER FORGED CONNECTING RODS

Prod. Group No. 1060

GKN supplies connecting rods for engines with displacements ranging from 1.6L to 6.2L including Diesel applications

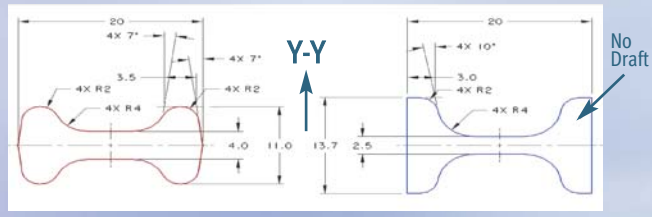
- GKN has produced powder forged connecting rods over 20 years. Throughout this time GKN has developed and manufactured connecting rods for more than 30 engines.
- GKN has worldwide manufacturing capabilities and a dedicated technical staff focused on advancing the technology of powder forging for connecting rods applications.
- Our services include supply of a 'as forged' blanks and 'fully machined' connecting rods that are ready for piston assembly.
- Key attributes include the most reliable fracture splitting technology, nearest to net shape design and high performance materials with optimized fatigue strength and optimization for efficient machinability.

POWDER FORGED DESIGN EFFICIENCY

Efficient I-Beam Design

No Draft

Improved Stiffness



Wrought Forging

Area (mm^2): 135.35
I_{YY} (mm^4): 5661
I_{XX} (mm^4): 832.5

Powder Forging

Area (mm^2): 135.35
I_{YY} (mm^4): 7201 - 27% Increase
I_{XX} (mm^4): 832.5 - 65% Increase

GKN SINTER METALS

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GKN POWDER FORGED CONNECTING RODS

1141 WROUGHT FORGING

Material: AISI 1141

Wrought forging averages 70% Material Utilization. Extensive machining is required to finish wrought forged blanks.

Weight mill and balancing are required.

Solid Pin End Bore, Trimmed Crank End Bore.

Draft and trim is required on the outer profile. Datum qualification is required.

Wrought forging relies on an inefficient I-beam design.

POWDER FORGED

Material: ASTM P/F 11C60 Grade-A

Powder forging averages 85% material utilization, requiring minimal machining.

No weight mill or balancing is required.

Bores are through forged. No drilling or trimming is required.

Precision outer contour, suitable as a datum in an as forged condition (no draft).

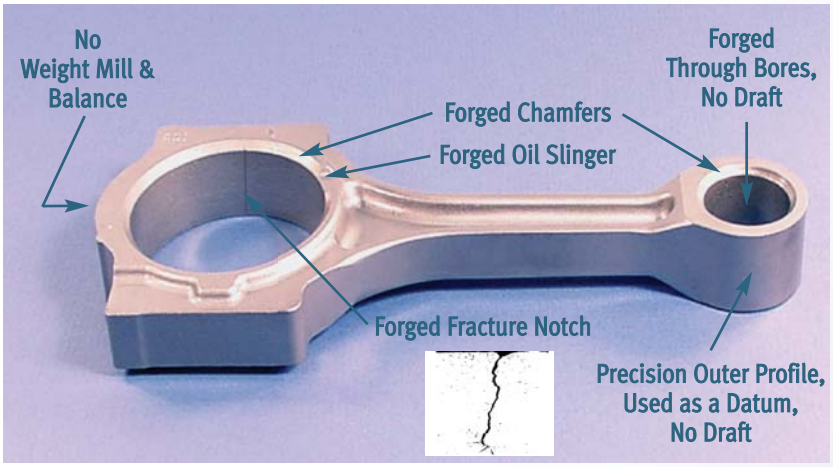
Efficient I-beam design with no draft and improvements for stiffness.

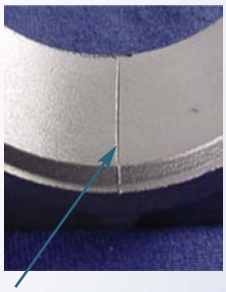
GKN powder forged connecting rods feature forged fracture split notch.

Pin and crank chamfers are produced within the powder forging operations. Oil features can be easily incorporated.

V6 - Wrought Forging Option

V6 - Powder Forging Solution





Minimize Machining Operations
Forged Fracture Split Notch