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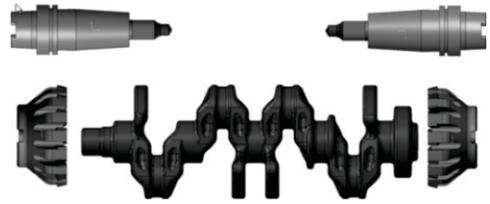
MACHINES FOR CRANKSHAFT MACHINING



Machines for High Production Levels

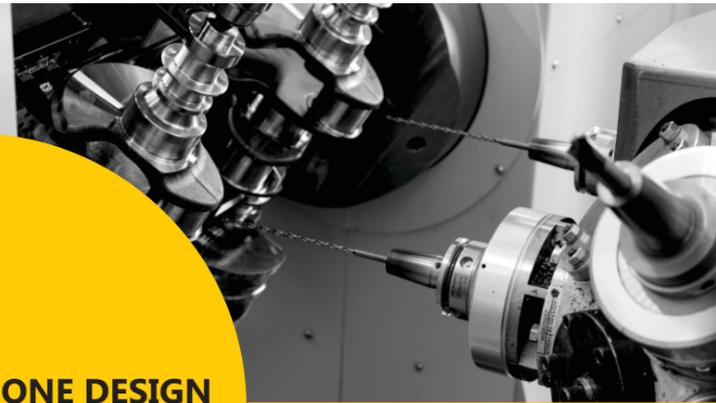
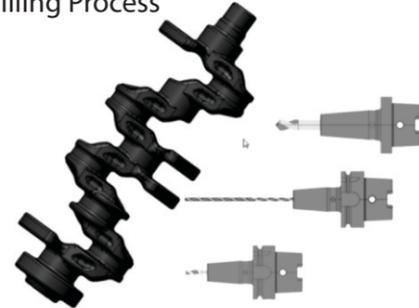
Face Milling and Centering

- ▶ Turret / MSH Design
- ▶ Geometrical / Weight Centering
- ▶ Dry Machining / MQL



Deep Drilling of Oil Channels

- ▶ 2/3 Spindle Design
- ▶ MQL/Oil/Emulsion Machining
- ▶ 3/4 Step Drilling Process



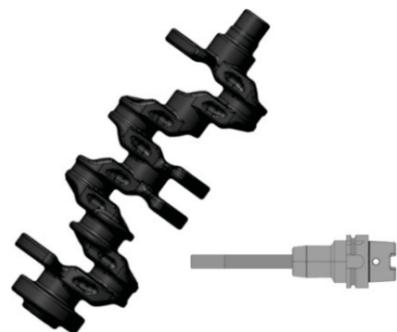
ONE DESIGN

- Deep Hole Drilling
- Weight Reduction Hole Drilling
- End Face Machining



Weight Reduction Hole Drilling

- ▶ 2/3 Spindle Design
- ▶ MQL/Oil/Emulsion Machining



End Face Machining

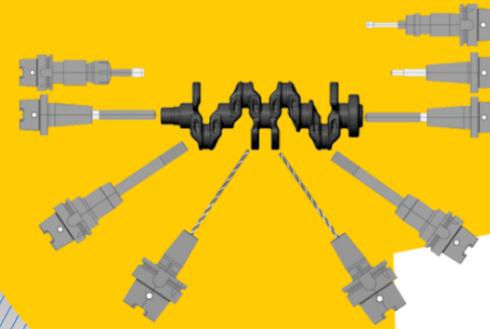
- ▶ 2 Spindle Design
- ▶ MQL/Emulsion/Oil Machining
- ▶ Option: Adjustable Spindle X, Y Position
- ▶ Option: IOSS + Needle Bearing Hole



From System Solutions to Universal Machining Center KWM

KWM is a high-tech machining center for highly productive and high performance manufacturing. The repeatedly improved modular design with practically tested and sturdy components guarantees outstanding stability, constant long-term precision, high availability and a high productivity.

ALL-IN-ONE SOLUTION



Technical Data

Base Machine

- ▶ 2-Spindle 5-Axis Machine
- ▶ 2x2 Spindle Design
- => Tool Change <1s

Machining Scope

- ▶ Deep Drilling of Oil Channels
- ▶ Weight Reduction Hole Drilling
- ▶ End Face Machining

Machine Size

- ▶ KWM 700 for Automotive Crankshaft Machining
- ▶ KWM 1500 for Commercial Vehicle Crankshaft
- ▶ KWM 2500/3000 for Crankshafts up to 3m

Loading

- ▶ Gantry
- ▶ Manual
- ▶ Robot

Control System

- ▶ Siemens 840D SL
- ▶ Indramat
- ▶ Fanuc

Coolant

- ▶ MQL
- ▶ Oil
- ▶ Emulsion