

TRANSPORTATION MOTORCYCLE CYLINDER HEADS

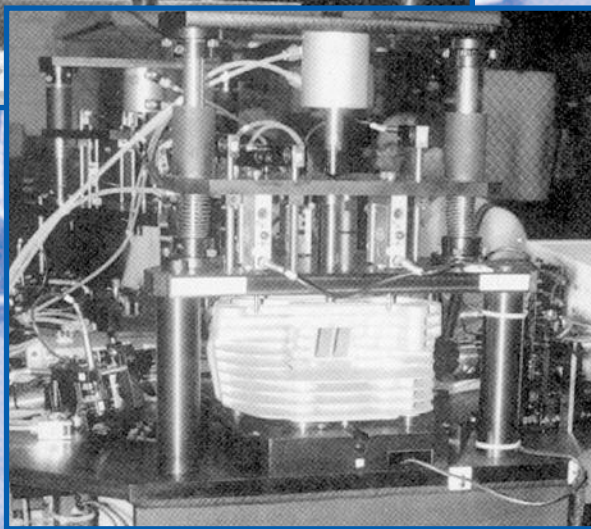
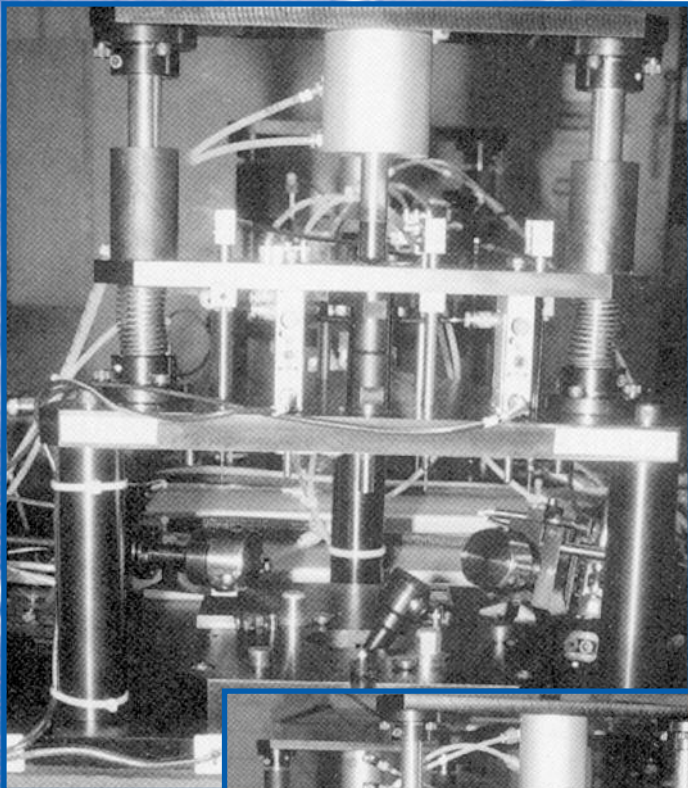
Case Study

Problem:

An aluminum diecasting company came to Kurt with quality problems and an inability of their current gaging to keep up with production requirements. Current gaging involved the use of a manual Coordinate Measuring Machine (CMM) to measure 21 features per cylinder head (both left and right hand heads produced for three engine sizes). The CMM was slow (about 45 minutes to measure the features required) which did not allow for real time information to be gathered to control the casting process.

Solution:

Kurt provided a Kurt Check gaging system to be used on the diecasting plant floor. The system used the Kurt/ATI modular elements along with LVDT's to capture the 21 features required on each cylinder head. For the intake and exhaust ports a series of slides, timed with air logic, progressively measured the bore diameters and locations. Locations were determined using XY coordinating tables to capture a location in space. The whole gaging process was entirely automated, requiring the operator only to load the part and press a single cycle start button. Within 45 SECONDS the 21 characteristics were measured, stored on a hard disk drive and displayed in control charts.



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| Production Process | Diecasting |
| Number of Characteristics | 21 per side (Left and Right Hand, 3 Engine Models) |
| KURT CHECK System Solution Price | \$79,000.00 (2 Kurt Checks and Gages) |
| Tolerances Required | .006" |
| Deliver of Kurt Check Gaging System | 16 weeks |
| Accuracies Achieved | .005" |
| Gage R&R Results | Less than 5% at 6s |

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