

**Company Name** Kadel Engineering

**Location** Keighley, UK

**Industry** Precision Machined Parts

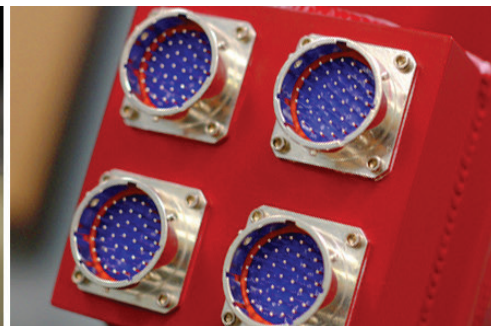
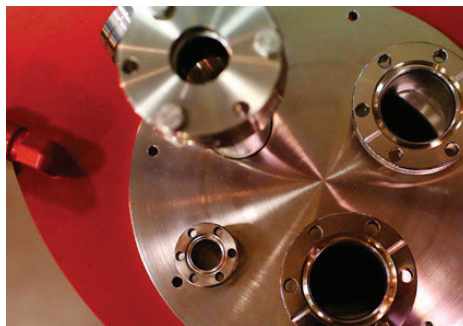
**Products Supplied** Baty Venture XT 3030 CNC Vision System

### APPLICATION BACKGROUND

Located in Keighley, West Yorkshire, Kadel Engineering Ltd is a family owned and managed business specialising in precision machined parts. Established in 1974, the business has built up an enviable reputation as a high-quality precision engineering company, offering extra commitment to quality and service.

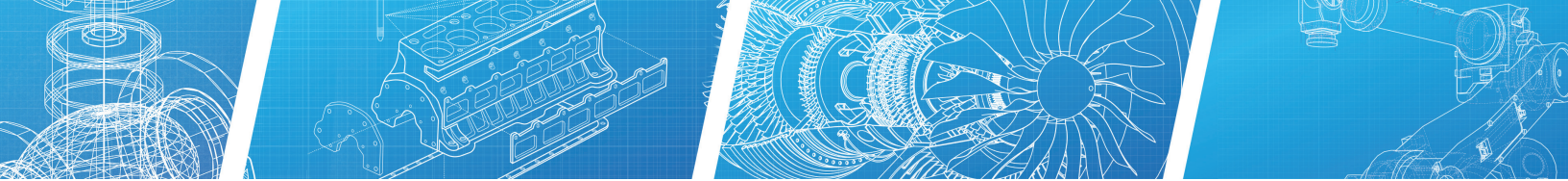
Kadel Engineering Ltd occupies a 16,000 sq ft workshop, enabling the company to provide precision parts to the engineering and technology sectors from a central position; ideal for its nationwide customer base. As a trusted supplier of an extensive variety of precision components to a wide range of industries, Kadel Engineering Ltd utilises the very latest technology, as well as highly qualified and experienced precision engineers. Kadel Engineering Ltd produces parts in a variety of materials predominantly for the Rail and Motor Sport industries.

Offering high quality milling and turning, Kadel Engineering Ltd has the capacity to manufacture both small and large batches of precision components in any material. Components produced include precision parts which make up the powertrains of Formula 1 cars.



### THE CHALLENGE

Kadel Engineering Ltd has recently invested in a large quantity of machinery to improve its manufacturing processes, and therefore wished to complete the loop by investing in measurement equipment in order to inspect the components made. As regular producers of precision parts for Formula 1 cars, the business has to ensure that manufactured parts meet the very highest levels of quality.



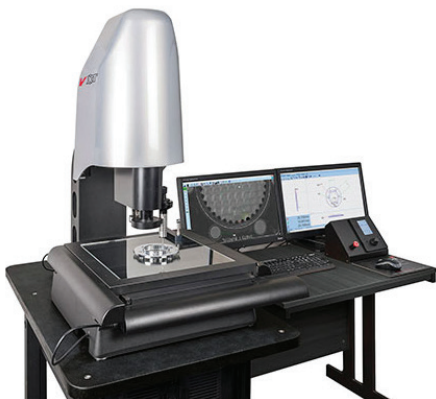
Parts must always meet very tight tolerances, typically within 0.010mm, are often required in small batches, and with a constant flow of new parts required. Quality is of the upmost importance, as parts for the rapid Formula 1 business have an exceptionally fast turn-around, and must be 100% correct.

## THE SOLUTION

After struggling to measure some key component features accurately and confidently, Kadel Engineering Ltd decided to invest in a more sophisticated optical measurement solution. The Baty Venture XT 3030 CNC vision system can be used for both contact and non-contact measurement, and includes advanced features for scanning and best fitting. It is also perfect for use as a visual inspection aid because it has a powerful zoom lens and good surface illumination.

The Baty Venture allows the business to measure features that were previously difficult to measure accurately. The non-contact scan facility has also enabled operators to check very thin, delicate components. As there is no longer any need to handle the parts during measurement, the risk of distorting the part during the inspection process has been eliminated.

The Baty Venture XT is a bench top CMM machine, and therefore ideal for measuring small parts. Machine operators are able to inspect the components they make as they go along, before further verification by senior staff members. Kadel Engineering Ltd also uses the Baty Venture XT to easily measure geometric tolerances such as roundness and flatness, which were previously difficult and time consuming.



## **"The delivery was quick and efficiently handled"**

Paul Rollins, Managing Director at KADEL Engineering Ltd said: "Components are needed at short notice for the build of the F1 cars, and are often required to be flown out to a race on the other side of the world. It is imperative that parts conform to the correct tolerances first time, as there is usually no time to remake or rework parts that do not meet those tolerances. Parts are rigorously checked by our customers, and our quality and performance closely monitored.

The Baty Venture XT acts as another inspector and an extra check, so it's near impossible for anything to slip through the net unnoticed. It can be used as an optical measuring machine and a CMM, so the combination effectively gives us 2 machines in 1, which is just what we needed for the parts we manufacture. We felt that it would not only give our customers more confidence in our ability, it also enables us to take on more complex parts now we have the equipment to measure them. It's also very easy to use and the software is very user friendly. There's the added advantage that it's very small and compact, and doesn't take up much room.

We are really happy with the service we received from Bowers Group. The delivery was very quick and efficiently handled, and the training was very thorough too!"