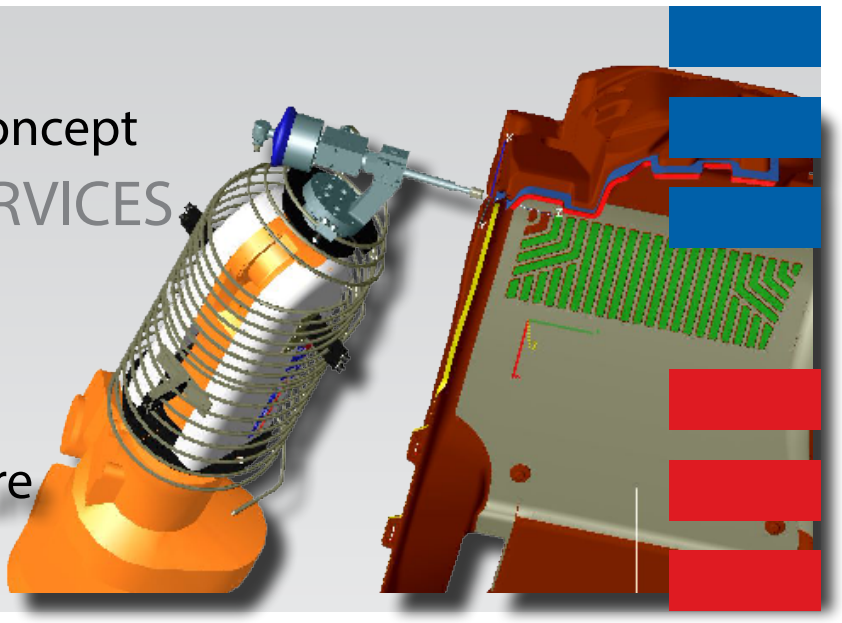
Total Production Concept

SIMULATION SERVICES



Predicting the future

Simulation Services
Dynamic Robotic Solutions has years of experience in 3-dimensional CAD simulations for robotic trimming applications that can provide you with predictive studies of your production process at a very early stage in the project.

Unlike the competition, DRS has a complete team entirely dedicated to performing robot simulations using the industry leading Robotstudio including DRS add-on software DRS PowerPac. The purpose of these simulations is to provide customers with optimal production data and requirements in terms of selection of trimming process; robot configuration; balancing the workload between the robots; cycle-time and loading requirements, so that all aspects of future production are evaluated before the equipment and tooling is manufactured, avoiding time consuming and costly corrections. Our simulation team works hand in hand with our system engineering and tooling design teams to create optimal production equipment. This collaboration puts DRS at the forefront, ahead of the competition, ensuring that the equipment works properly first time and gives long lasting performance.

Available services:

1. Fixture/tooling simulation
A correct and optimal placement of the part or product to be trimmed, regardless of process, is crucial to obtain the highest output from the equipment. DRS uses customer-provided 3-dimensional CAD data of the part or product to simulate and determine the optimal position and placement. The robot models used in the ABB Robot studio simulation software are utilised virtual controller to guarantee that all robot movements and limits are simulated properly. The simulation results are provided to thecustomer as a CAD-file displaying the product to be trimmed in relation to the DRS pallet base frame. Reference points for the work-object definition are described either in the CAD-file or as a separate document.

2. Trimming angle simulation
A trimming angle simulation is conducted whenever concerns or questions are raised regarding size or performance of the trimming tool used or if the trimming tool may interfere with peripheral items or the product itself. The CAD data will provide a display of the defined edge for trimming but it may not have been considered how the edge should be trimmed. With a trimming angle simulation, DRS can work together with its customers to find the optimal solution to solve a trimming application.

3. Cycle time estimation
Dynamic Robotic Solutions has vast experience of different trimming methods on automotive interior products such as headliners, dashboards, carpets and insulation products. Our database includes trimming parameters for the most common products and fabrics which enables us to quickly determine an accurate cycle time estimation if the actual product is not yet available. Upon request and availability of material, DRS can of course conduct a physical material test to determine the trimming parameters needed to complete a cycle time estimation. The actual cycle time estimation can be determined either from a 3-dimensional CAD drawing or the product.

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