



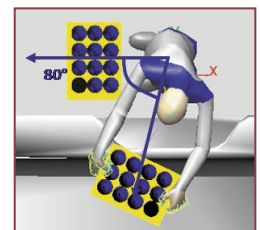
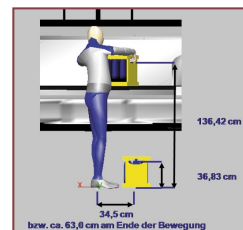
NASA, REFA, NIOSH ANALYSES

The NASA, REFA and NIOSH analyses integrated into RAMSIS enable the evaluation of two-handed lifting movements repeated over a longer period of time. They also enable the evaluation of movements made when lifting and carrying objects and offer a discomfort and maximum force analysis.

THE ANALYSIS PROCEDURE:

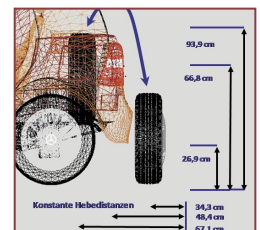
NIOSH analysis

- » Calculating a recommended load limit
- » Representation of influencing sizes in factors
- » Factors provide pointers for improvements in design and work operations



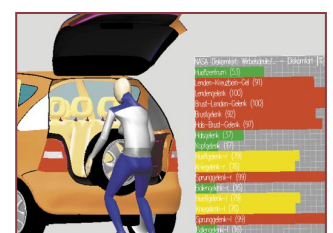
REFA analysis

- » Calculates individual normal force, maximum force and the associated limit load
- » Addresses a multitude of various influencing variables



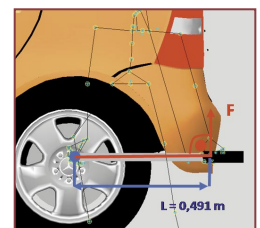
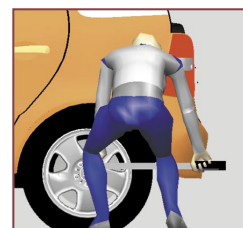
NASA Discomfort analysis

- » Joint-related, static-physical whole body evaluation.
- » Influences affecting discomfort:
 - Degree of utilization N (G)
 - Joint point resistance W (G)
 - Joint torque M (G)
- » Deviation from reference posture (NASA 0g)
- » Normal force F



Maximum force forecast

- » Analysis of the maximum, tolerable and sustainably achievable force
- » Addressed in achieving this:
 - User-defined joint chain in actual posture
 - Body dimensions, gender and age group
 - Direction in which the force is to be effective



Please find more information on www.human-solutions.de or contact us for a personal meeting at +49 631 303-5600.