

## RoboScanner D10.2 Automatic 3D Scanner System on Robot

### Easy Scanning - RoboScanner

Descam presents a 3D scanner on a robot arm. On industrial robots this is already available, but these are largely, heavily and expensively, stationary installed and with a safety cage surrounded.

With our RoboScanner these disadvantages are omitted completely, since it weighs only 29 kg, no safety cage is necessary and it is inexpensive.

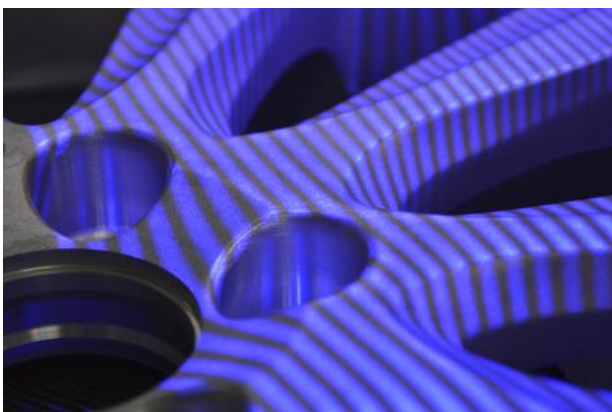
The 3D capturing takes place with a DLP fringe projector with blue LED light and a 2 megapixel CCD camera.

You can choose between 3 different FOV.

We considered during the development mainly easy handling and automated work flow. You can capture the individual scan positions by manually movement or with a mouseclick at the screen into the data gap. Then RoboScanner moves automatically in the correct distance to the scan position and takes a shot. A collision check takes place in real time. All travel paths are logged and can arbitrarily often be repeated.

The individual data shots are fine registered to each other in the RoboScan software and either transferred separately successively or together into the processing software e.g. Geomagic or Polyworks. These software can be installed on any PC, reachable through the internet. A script controls the further automatically treatment.

RoboScanner is to be used in the inspection and for multiple measurements of similar components particularly favorably. Optional are available a turntable and a tracking system.



Structured light projection

### RoboScanner



Scanning of casted parts



RoboScanner measuring a gear box

## Automatic 3D Scanner System on Robot

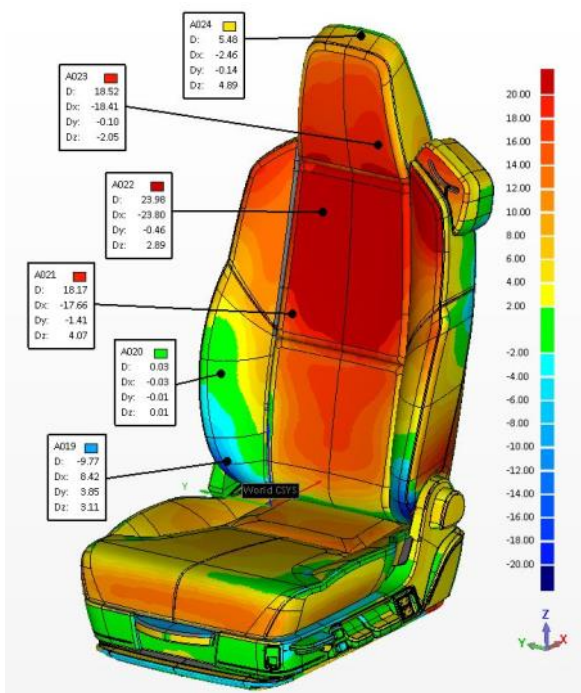
### Features

#### System Components

- Safety cage free 6-axes robot arm
- Control panel with 12" touch screen
- Emergency button
- Control box
- DLP fringe projector, Blue LED
- Firewire800 CCD camera, 2 megapixel
- Computer multicore processor, WIN 7, 64 bit
- RoboScan software
- Options: Turntable, Tracking system

#### RoboScan Software

The software guarantees quickly learn the ropes and easy handling of this very complex system. From 3D capturing, fine registration of the patches up to the automatic transfer into e.g. Geomagic Qualify/Studio the process runs automatically. Over scripts nearly all, even customized tasks can be automated.



Seat Analysis

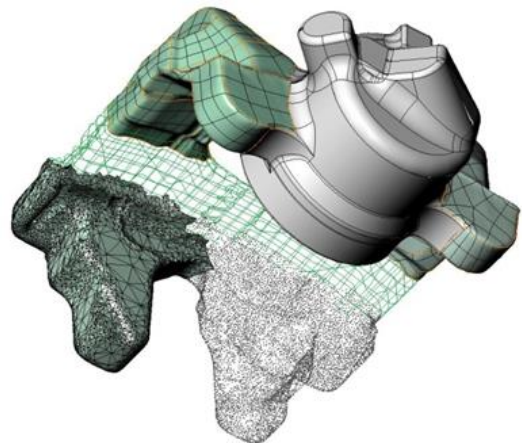
### Technical Data

#### Robot Arm

- Radius robot arm: 1.300 mm
- Weight robot arm / control box: 25 kg / 17,2 kg
- Dimension control box: 462 x 423 x 268 mm<sup>3</sup>
- Protection category robot arm: IP 54
- Power supply: 200-240 V, 50 - 60 Hz

#### 3D Sensor Unit

- Projector: Digital, DLP, Blue LED
- Camera: Firewire800, CCD, 2 Megapixel
- Resolution: 1624 x 1234 pixel
- Standoff: 360 / 480 / 640 mm
- Point spacing: 0,1 / 0,2 / 0,3 mm
- Accuracy :  $\leq 0,1$  mm
- Recording time:  $\leq 0,2$  s
- Operation: In internal space
- Area of measurement : A5 / A4 / A3
- Ambient temperature: + 5° up to 40° C



Descam – your supplier for 3D scanning systems