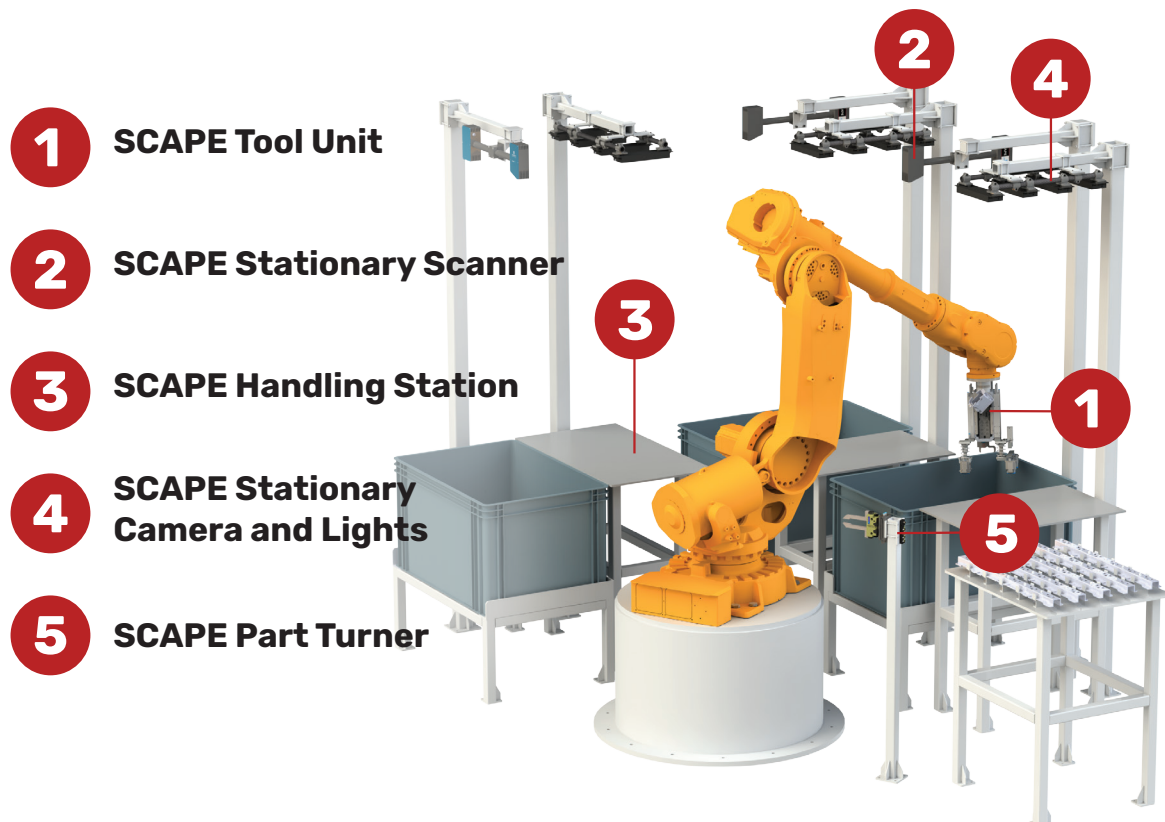


## CASE 6

### Cross beams at BMW Leipzig



- 1** SCAPE Tool Unit
- 2** SCAPE Stationary Scanner
- 3** SCAPE Handling Station
- 4** SCAPE Stationary Camera and Lights
- 5** SCAPE Part Turner

**Approximate price:**  
**€ 142.100**

THREE PARTS ARE DELIVERED INTO THE TABLE FIXTURES AVERAGELY EVERY 15-20 SECONDS.

HIGH PRECISION IS REALIZED THROUGH REGRIPPING OF PARTS ON THE SCAPE HANDLING STATIONS SUPPORTED BY THE SCAPE PART TURNER. THE ROBOT GRIPS THE PARTS FROM THE BIN, RE-GRIPS THEM AFTER THE ORIENTATION CONTROL AND FINALLY DELIVERS THEM INTO THE FIXTURE.

CYCLE TIME:	15-20 SECONDS
PART WEIGHT AND DIMENSIONS:	0.4-0.7 KG; 320 X 140 MM (APPX.)
PART DELIVERY:	HIGH PRECISION DELIVERY INTO FIXTURE
VISION SENSOR:	THREE SCAPE STATIONARY SCANNERS

## SCAPE BIN-PICKER

### General Information

THE SCAPE BIN-PICKING SYSTEM CONSISTS OF SEVERAL MODULES WHICH CAN BE COMBINED IN DIFFERENT WAYS TO OPTIMIZE THE BIN-PICKING SYSTEM TO THE CUSTOMER NEEDS. COMMON FOR ALL MODULES IS THE SAME GENERIC SOFTWARE, I.E. SAME SOFTWARE EVERY TIME AND NO TAILOR-MADE PROGRAMMING NEEDED.

THE FOLLOWING IS AN INTRODUCTION TO THE MOST IMPORTANT MODULES. FOR MORE DETAILS ON THE MODULES SEE PRODUCT SHEET:

#### **SCAPE Software Suite**

The main software suite in the SCAPE system included in all SCAPE modules.

#### **SCAPE Part Training Studio**

The Part Training software enables you to perform full training of new parts for Bin-Picking and Orientation Control without programming. SCAPE Part Training Studio works with all SCAPE modules and is optional.

#### **SCAPE Vision Sensors**

##### **SCAPE Grid Scanner (Standard & Compact):**

A sensor mounted directly on the robot. It is a simple and cost-effective solution. It also makes it possible to place as many bins as needed at any position if the robot can reach the bin to acquire images.

The SCAPE Grid Scanner Standard can be mounted in SCAPE Tool Unit - Standard/Large and the SCAPE Grid Scanner Compact can be mounted in SCAPE Tool Unit - Compact.

##### **SCAPE Stationary Scanner:**

With the SCAPE Stationary Scanner, the scanning is conducted quickly leading to fast cycle times. The scanner is fixed mounted above bins and can handle 2 bins at the same time.

This gives high flexibility and lowers cycle times up to 30%, because the robot can move while scanning, i.e. the robot is not involved in acquiring image data.

##### **SCAPE Sliding Scanner:**

The SCAPE Sliding Scanner is mounted above the bins on a linear unit moving back and forth.

This lowers cycle times up to 30% because the robot is not involved in acquiring image data. The scanner can handle very large parts and can be shared among 2 or more robots.

#### **SCAPE Orientation Control**

If precision delivery is needed<sup>1</sup> SCAPE Orientation Control is the right solution. SCAPE Orientation Control is used to recognize the part position and re-grip it with high precision.

To guarantee a precision delivery the part is placed on the SCAPE Handling Station. Depending on the bin-picking situation. The part can be processed by either a 3D Grid Scanner or a stationary camera (for faster cycle times).

#### **SCAPE Tool Units**

It is often necessary to use more than one gripper in a bin-picking installation. The SCAPE system includes a Tool Unit on which multiple grippers can be mounted. It is possible to configure the Tool Unit with grippers fitting the needs for the specific installation.

*1) The exception is semi-structured parts in a bin. In this case it is often possible to design a gripper which can perform precision grip directly in the bin. In this case SCAPE Orientation Control is not needed.*