



# TQ Screw Fastening Solution Overview

These Apps are included in this package:



**TQ Screw Fastening**



**TQ Pick Screw**



**TQ Screw Repeat**



## App: TQ Screw Fastening

**Simple fastening of screws with various requirements in a single app**

### Features:

- Simple configuration of Modbus signals for the communication with the drill controller
- Detecting of errors in the tightening process
- Adjustable number of tightening retries in case of an error
- Teaching of an arbitrary number of screw poses
- Give a name to each screw pose
- Applying an adjustable force to the screw throughout the tightening process
- Select a setting (Pset) for the initial screw attempt for each screw pose
- Select a separate Pset for each retry attempt for each screw pose
- Clear view of the taught screw poses in the robot's coordinate system
- Fine adjustment of each screw pose
- Simple switching of the screw pose order
- Configure an approach and return motion for all screw poses
- Configure a specific approach and return motion for each screw pose



## App: TQ Pick Screw

**Picking of screws from a taught position**

### Features:

- Simple configuration of Modbus signals for the communication with the drill controller
- Detecting of errors while picking up the screws
- Picking up the screws magnetically or with vacuum
- Picking up the screws with a Pset if desired
- Simple teaching of the picking pose
- Fine adjustment of the picking pose
- Configure an approach and return motion to and from the pick pose



## Group: TQ Screw Repeat

Repeating of all contained apps for each screw pose

### Features:

- The number of repetitions does not have to be configured but is automatically determined from the number of screw poses