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Press-Insertion Station for M6 + M8 Bolts

This month's E-News showcases an assembly station, which was manufactured for a 2nd tier supplier to an automotive manufacturer. This station consists of four (4) main components, a) Load Station, b) M8 Bolt Insertion Station, c) M6 Bolt Insertion Station and d) Unload Station. Please see below for a description of each individual station.

a) Load Station



Axis System with Gripper Conveyor for Pallets

The conveyor transports baskets which contain the two different receiver plates needing assembly. A two-axis system with gripper removes each individual receiver plate and places them into the parts pallet. Before the machine continues its cycle, sensors on the grippers determine whether a left-hand or right-hand plate execution will be assembled.

b) M8 Bolt Insertion Station



4 Presses Bolt Insertion Device

The bolt insertion device loads the receiver plates with M8x35 or M8x56 bolts. Two separate screwfeeding machines supply the necessary bolts. Thereafter, the bolts are assembled vertically through press-insertion, which also includes a pressure-distance monitoring device.

c) M6 Bolt Insertion Station



Marking System 2 Presses Bolt Insertion Device

On this station, the bolt insertion device loads the receiver plates with M6x12 bolts. One screwfeeding machine supply the necessary bolts. The bolts are assembled horizontally through a press-insertion system, which also includes a pressure-distance monitoring device. A marking system marks the receiver plates with data supplied by the controller.

d) Unload Station



Axis System with Gripper
Conveyor with rotary index table Chute for "Bad" parts

A 3-axis system with gripper removes the completely press-inserted and tested plates from the pallet and sorts correct parts according to right- or left-hand execution into a transport container. The transport containers are supplied using a 4-position rotary index table. Incorrect parts are removed from the station by the use of a bad-part chute.