

Techno-Nav!

テクノナビ

Application 10

Automatic Mold Change Interface

Available models:
SE75EV-A - SE180EV-A/
SEEV-A-HD

Overview

This application improves productivity by reducing setup time with automatic mold changing process. You can avoid human error and achieve greater operating efficiency.



Problems at Setup

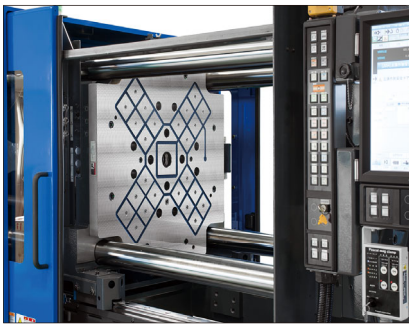
- Incorrect molding conditions
- Wrong mold
- Misoperation of crane
- Improper tightening of mold bolts

Lead to
careless mistakes

- Damage to mold
- Scrap of parts
- Wasted setup time
- Loss of production time

Solution and Configuration

Peripheral units (Air/hydraulic/magnetic clamps, auto coupler, mold changer) are connected to a molding machine and automatically controlled by commands from the molding machine.



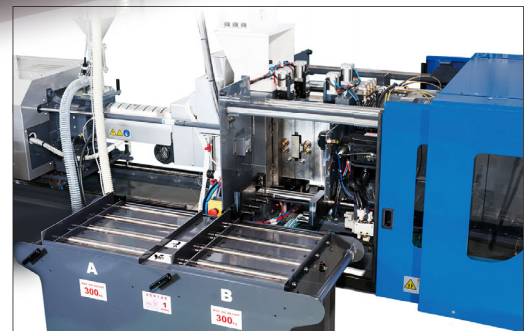
Magnetic clamp



Air/hydraulic clamp



Auto coupler



Mold changer

Photos of peripheral units are courtesy of Pascal Corporation.

Benefits, Operation Flow and Specs

Continued on the back side ▶▶



Example of Benefits

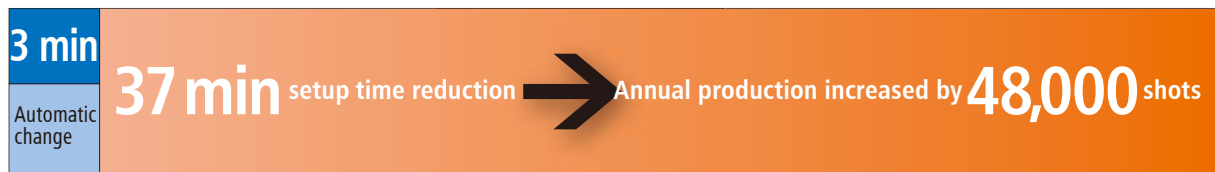
We compared the setup time of mold change process with this application to the standard procedure. This application saves 93% of setup time, which will greatly increase annual production.

Standard procedure for mold change

40 min						
Disconnecting hoses	Removing bolts	Mold unloading	Die height adjustment	Mold loading	Tightening bolts	Connecting hoses
5 min	5 min	20 min			5 min	5 min



Mold change using this application



M.T.C stop	Coupler moves backward	Clamps turn off	Mold unloading	Die height adjustment	Mold loading	Clamps turn on	Coupler moves forward	M.T.C start
-	30 s	10 s	100 s		10 s	30 s	-	-

Operation Flowchart

Sequential operation (Blue) Simultaneous operations (Pink)

Automatic process	Manual process	Mold change start		Automatic process			Mold change completion		
Mass-production – Production end	Preparations for mold change	Mold unloading		Mold unloading	Preparation for mold loading	Mold loading	Mold mounting		
Mass-production	Performed by operator	Coupler moves backward	Mold unloading	Mold unloading	Die height adjustment	Mold loading	Mold mounting	Coupler moves forward	M.T.C start
Dosing for next shot		Changer moves to unloading position			Changer moves to loading position		Changer moves to standby position		
M.T.C. stop		M.T.C. pre-heating stop						Automatic purging	
IJ unit retraction									

Interface Specifications

Clamping unit	I/O (Built-in type, operating switch installed on a molding machine)
Auto coupler	I/O (Operating switch installed on a molding machine)
Mold changer	CC-Link IE Field (Molding machine: Slave / Changer: Master)

