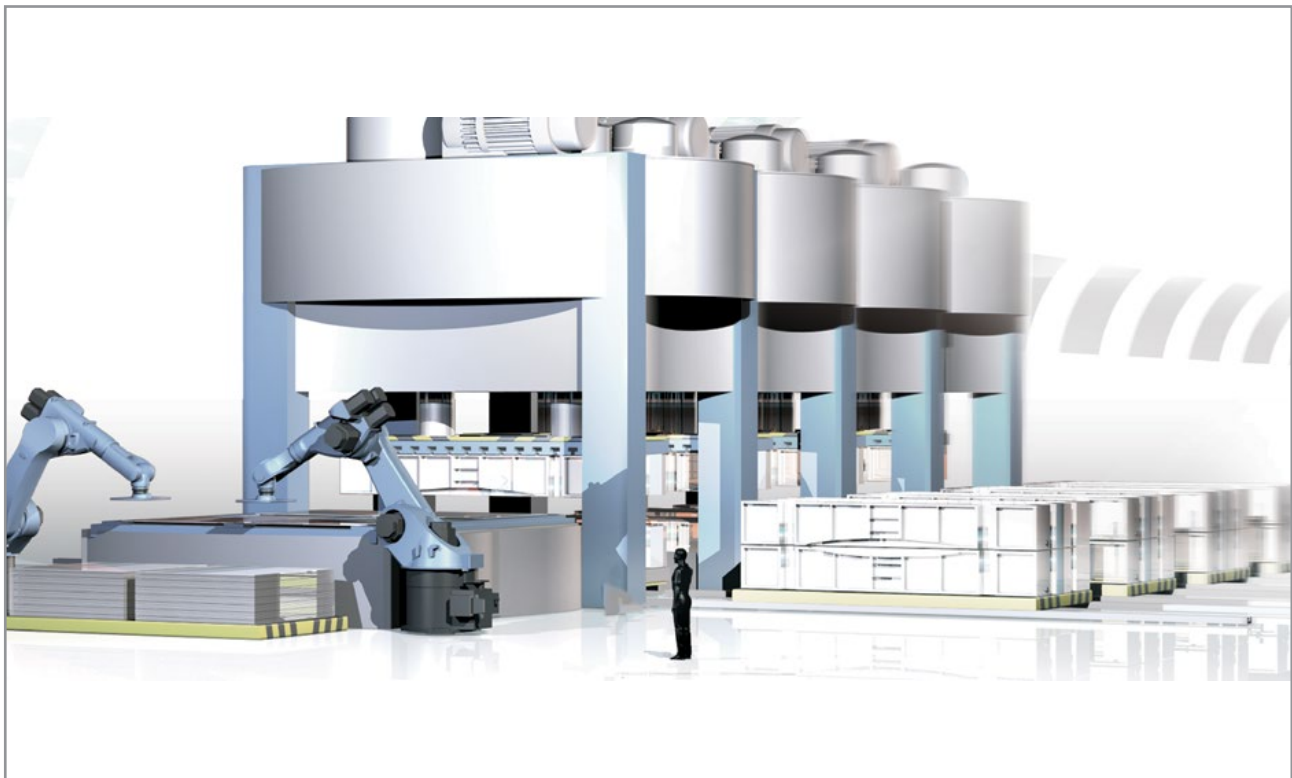


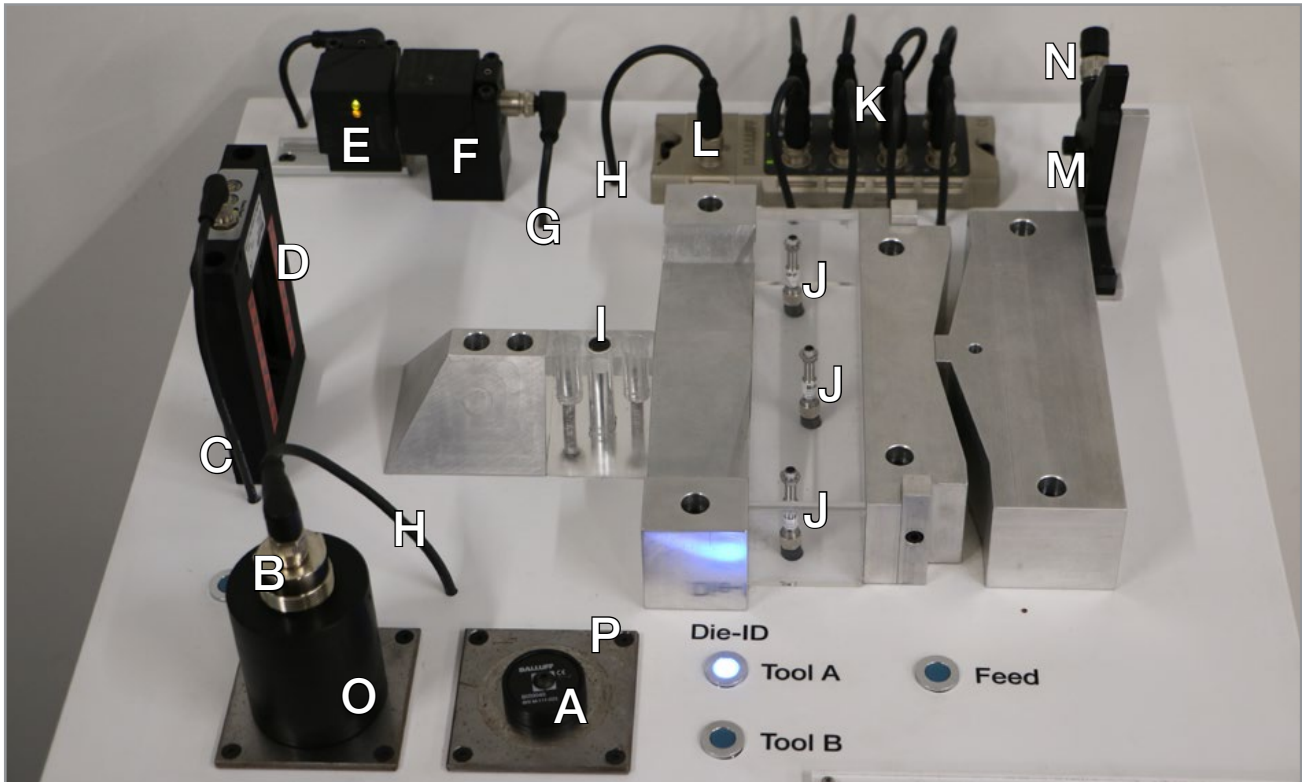
Metal Forming

In-Die Sensing & Press Setup Solutions

In most tool rooms, tool and die makers are spending the majority of their time fighting fires and repairing damaged tooling, such as: sheared punches, snapped pilots, bent strippers, cracked sections, and smashed stop blocks. Management demands for faster repairs to meet manufacturing schedules and idle welders puts added pressure on the tool room's limited resources. Damaged tooling coming into the tool room is routinely blamed on a variety of issues like misfeeds, part out detection, and wiring damage.

With Die Protection, the goal is to identify an issue with enough time to stop the press before tooling damage can occur. Sensors are used to detect issues like short feed, over feed, slug stacking, or part ejection failure. In order to utilize the solutions presented in this guide, a press controller capable of accepting sensor inputs is required. Balluff is an experienced die protection partner for this industry and provides a wide range of technologies for die protection applications.





Letter	Order Code	Description
A	BIS0045	Data carrier, 2000 bytes
B	BIS00LH	Die ID, 83 mm, IO-Link, RFID Read/write/ head with integrated processor
C	BCC02MC	Connector/cable, M8 Female straight, PUR (shielded), black jacket, 2 m
D	BOW001A	Frame through-beam sensor, M8 Connector, PNP, NO, 18x140x90 mm, Dynamic sensing
E	BIC0070	IO-Link Inductive coupling, Base unit with 32 bytes data transfer
F	BIC0071	IO-Link Inductive coupling, Remote unit 0.5A at 24V
G	BCC0321	Connector/cable, M12 Male 90° angle, PUR, black jacket, 2 m
H	BCC032F	Connector/cable, M12 Female straight, PUR, black jacket, 2 m
I	BES00HF	Feed sensor, Inductive sensor, Connector, PNP, NO, Sn=1.5 mm, Flush (shielded), 12 mm, Supershorty
J	BES00CU	Feed sensor, Inductive sensor, Cable, PNP, NO, Sn=1.5 mm, Flush (shielded)
K	BCC031N	Connector/cable, M12 Male straight, PUR, black, 2 m
L	BNI003T	IO-Link Input hub with 16 PNP I/O
M	BWL001L	Angle through-beam sensor, M8 Connector, PNP, NO, Infrared, 14x113x90 mm
N	BCC032Y	Connector/cable, M12 Female 90° angle, PUR, black jacket, 2 m
O	BAM02MU	Magnetic coupler for M30 BIS or BIC
P	BAM02MW	RFID Tag mount for magnetic coupler