

METAL FABRICATION SOLUTIONS

For automotive and non-automotive motorized vehicles

Automotive

All-Terrain Vehicles

Snowmobiles

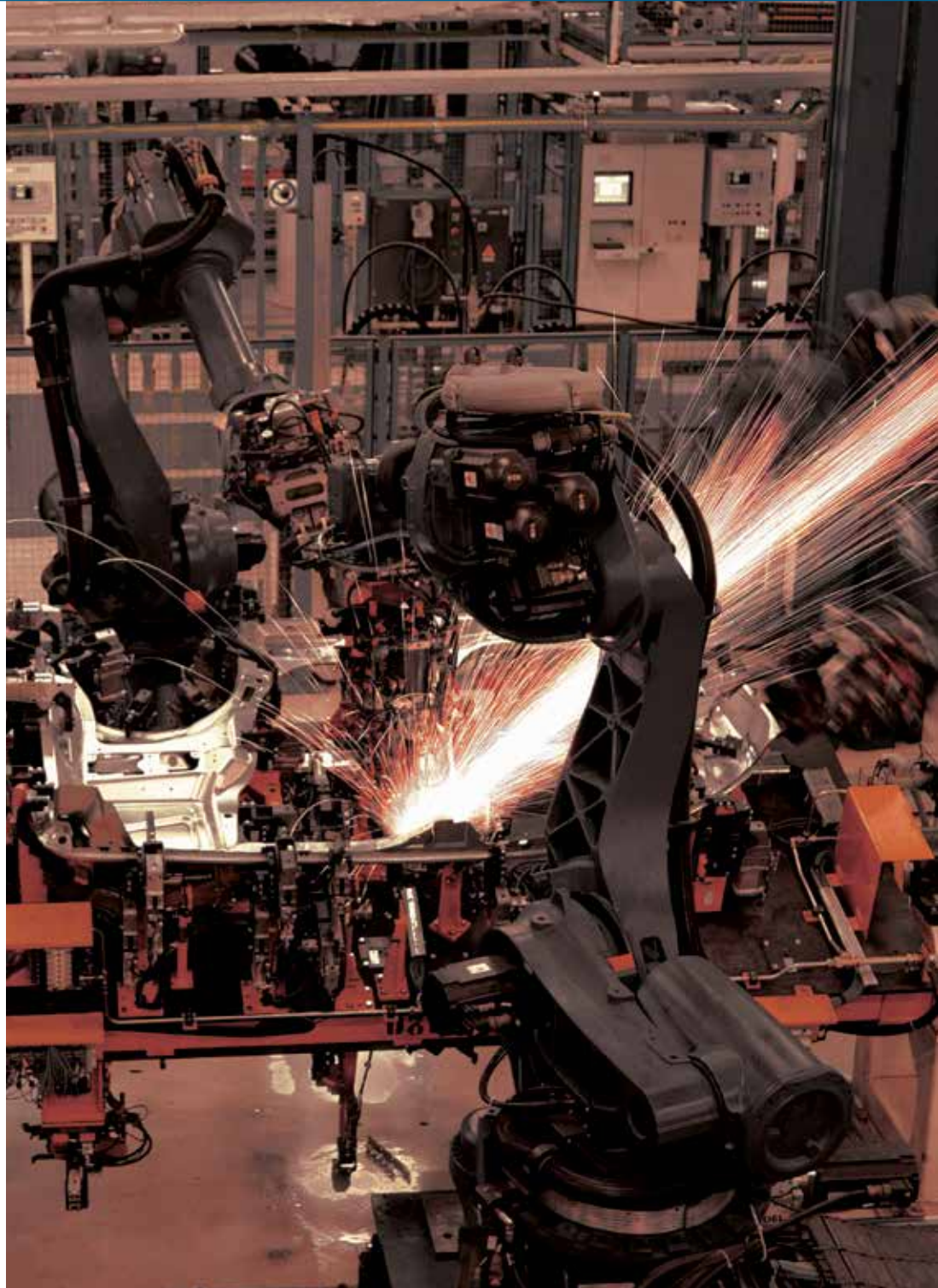
**Compact Excavators
Construction Machinery**

Riding Lawn Mowers

Fork Lifts

**Motorized Utility Carts
Golf Carts**

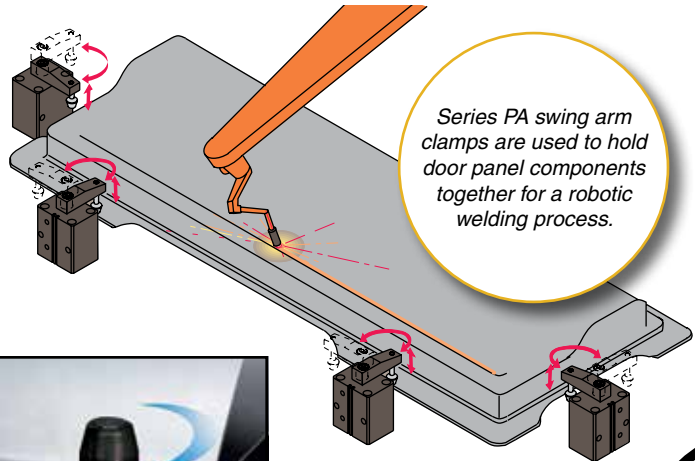
Aerospace



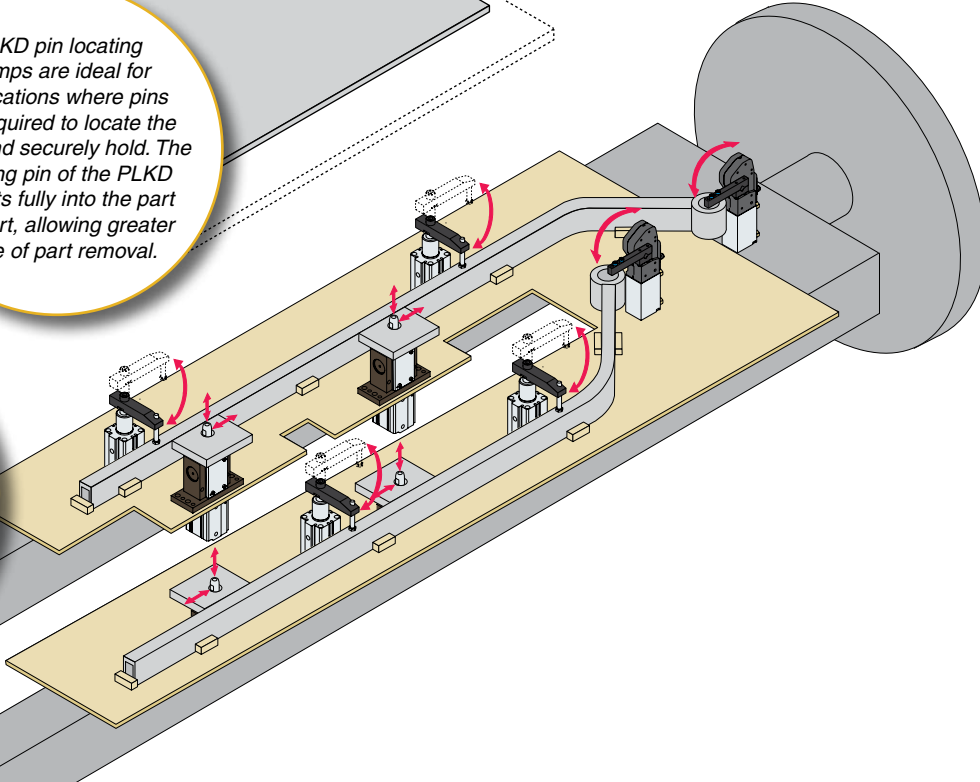
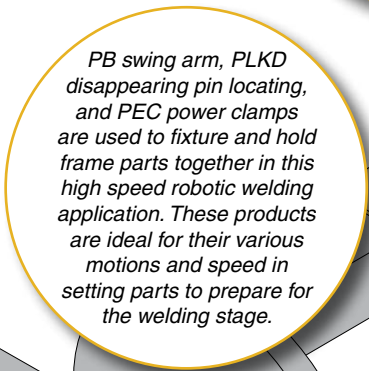
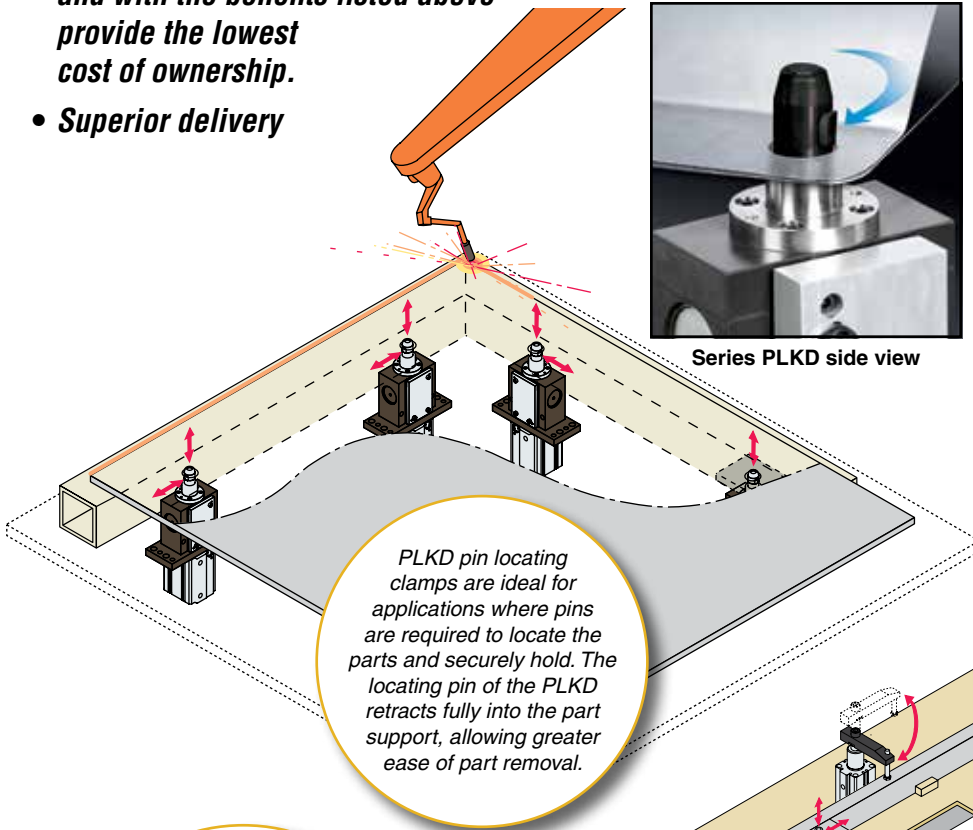
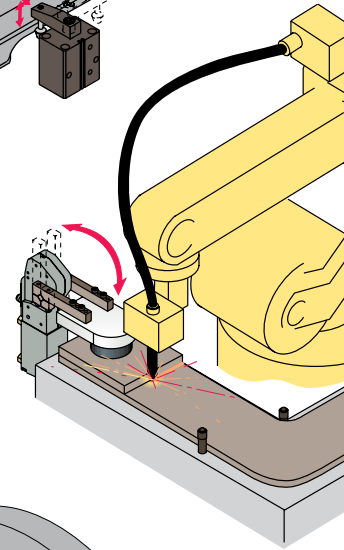
PHD Solutions at Work

Reduce downtime and increase production throughout the plant.

- ***Our robust designs provide longer life over other actuators.***
- ***PHD Clamps maintain repeatability over life providing superior performance and increased productivity by reducing downtime and scrap.***
- ***PHD Clamps are field repairable and with the benefits listed above provide the lowest cost of ownership.***
- ***Superior delivery***

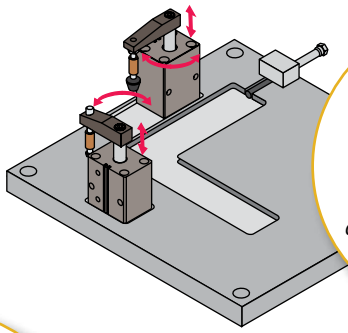


Series PLKD side view

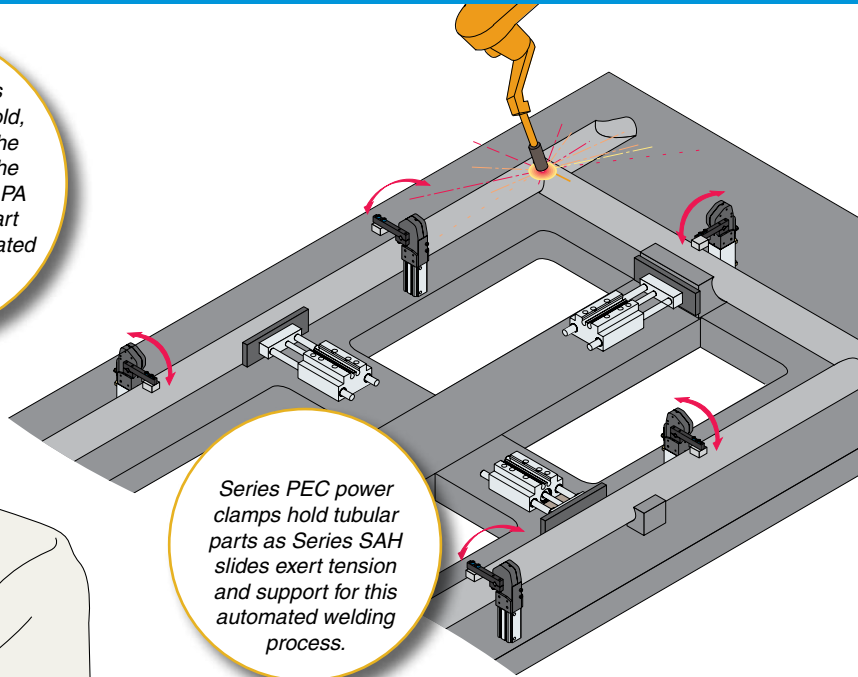


Assembly • Frame Welding • Frame Drilling • Frame Bending • M

Metal Fabrication Applications

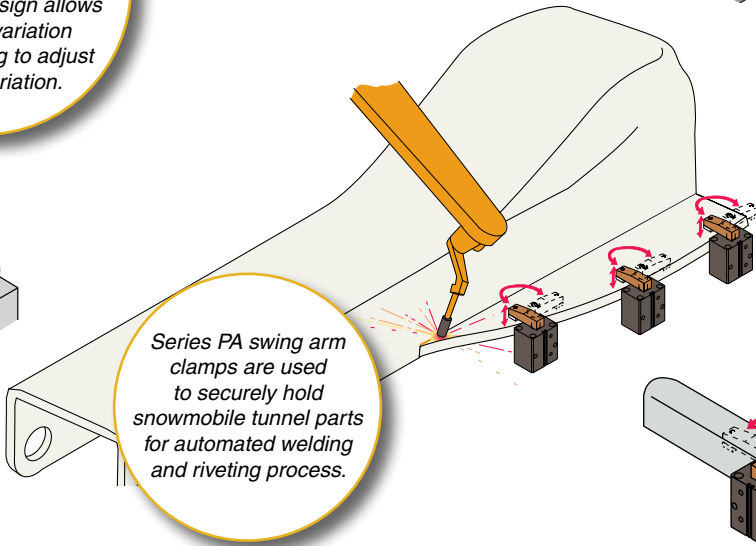


When a part comes out of the injection mold, the operator places the part in a nest. Then the operator actuates the PA clamps to hold the part down during an automated trimming operation.

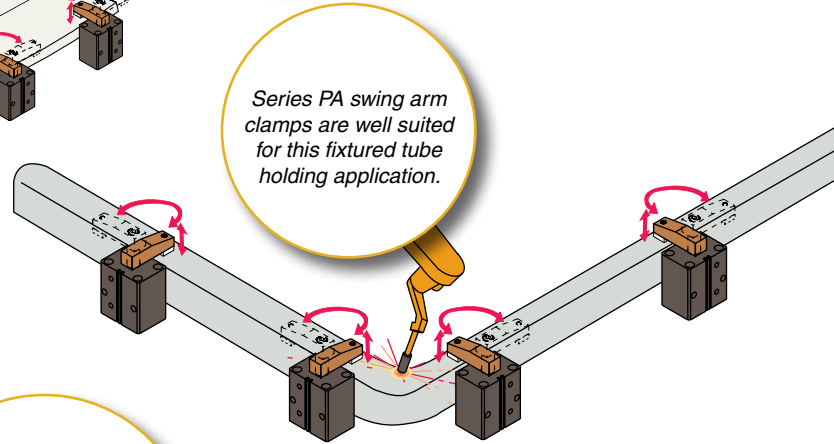


Series PEC power clamps hold tubular parts as Series SAH slides exert tension and support for this automated welding process.

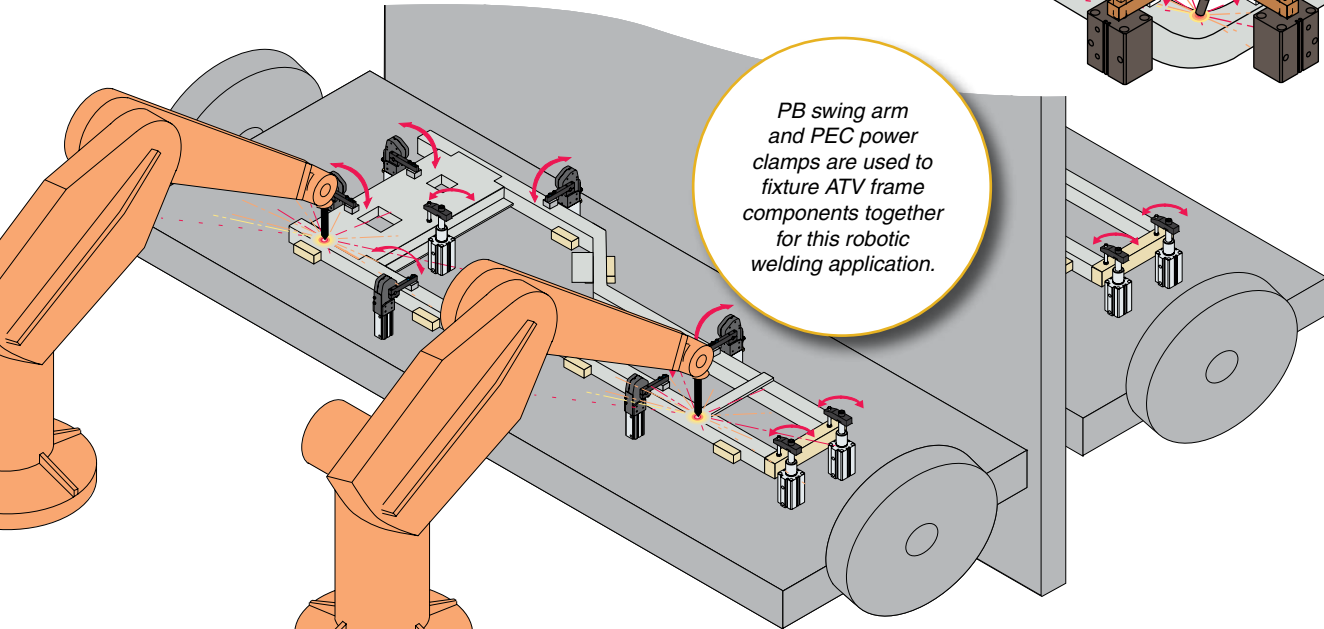
Series PEC power clamps hold down parts while a robot welds smaller parts into place. PHD's cam design allows more part variation without having to adjust for part variation.



Series PA swing arm clamps are used to securely hold snowmobile tunnel parts for automated welding and riveting process.



Series PA swing arm clamps are well suited for this fixtured tube holding application.



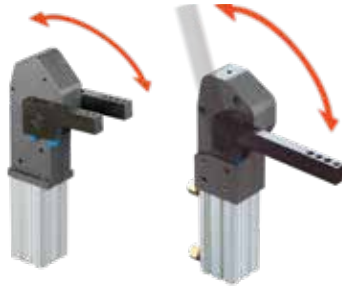
PB swing arm and PEC power clamps are used to fixture ATV frame components together for this robotic welding application.

Material Transfer • Robotics • Tube Welding • Jigs • Part Fixturing

PHD Clamps

Provide superior part holding and transferring for your assembly and welding environments.

Series PEC

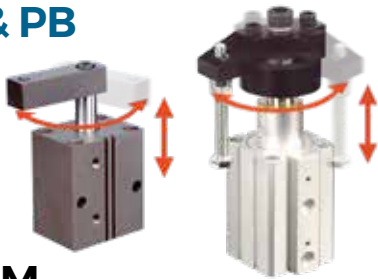


Features & Benefits

- Cam design provides widest range of high clamping force in its class. Ensures part retention if air pressure is lost.
- Available in four bore sizes for application flexibility.
- Multiple output shaft options for mounting arms on either or both sides. Provides unique alternative to typical clamp mounting configurations.
- Weld field immune switch option provides consistent position sensing.
- Enclosed design prevents particles and weld slag from entering.

POWER

Series PA & PB

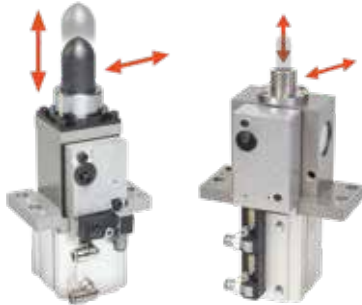


Features & Benefits

- Simple design, compact size, for low weight, long life, and high clamp force.
- Available in several bore sizes for application flexibility.
- Mounting patterns on multi surfaces provide flexibility in clamp mounting.
- Switch ready for easy interfacing to electronic controls and logic systems.
- Series PB for direct replacement unit opportunity applications.
- Available in left and right rotations to fit a variety of applications.
- Series PB offers rod weld cover to protect cylinder rod and bearing areas from weld splatter during clamping.

SWING ARM

Series PLK & PLKD

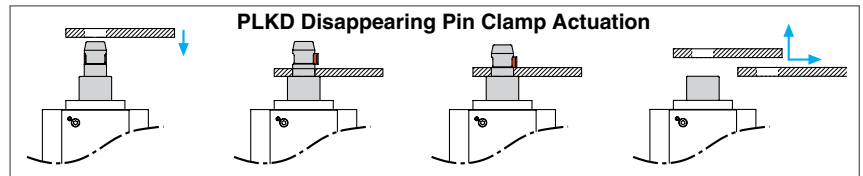


▲ weld field immune switch

Features & Benefits

- Completely enclosed finger/pin protects against weld slag and contamination.
- Available in various pin diameters and sizes for application flexibility
- NAAMS mounting
- Weld field immune switch option provides open or closed sensing.
- Dual switch position sensing on PLKD provides control feedback for all four clamp conditions: pin full extend, finger in/out, clamped, pin full retract

PIN LOCATING



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www.phdinc.com/clamps



Rebuild. Repair. Recycle.

Rebuild or repair your PHD Clamps for significantly less cost than the original price. Ask your distributor about PHD's Rebuild Program.



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