Infrared Welds Heavy-Duty HDPE Boxes

PUBLIC CASE REFERENCE

Heat both joint faces. Press without hot plates.

15-45 S REFERENCE CYCLE



THE PROCESS CHALLENGE

Large molded box sections may vary in thickness, geometry and color. Contact plates can collect plastic residue and complicate repeatable production.

THE INFRARED APPROACH

Programmed short-wave infrared heaters bring the mating surfaces to the joining window without contact. The heater retracts and the two parts are pressed together.

1. **LOAD** — Fixture both halves
2. **HEAT** — Melt joint faces
3. **RETRACT** — Clear the heater
4. **PRESS** — Form the weld

APPLICATION FEATURES

- Non-contact heating avoids material on a hot plate
- Emitter zones can follow variable wall thickness
- Fast response supports automated sequencing
- Joint quality can be checked by destructive testing
- Recipe control supports different crate geometries

APPLICATION NOTE

Public case-study reference - not a YFR performance claim. Confirm equivalent results through YFR sample testing before publishing as a customer result.

TYPICAL CONFIGURATION

PUBLIC RESULT	**Reference process cycle: 15-45 s**
QUALITY	Reference weld stronger than parent material
EMITTER	Programmed short-wave infrared
CONTROL	PLC sequence, power zones and timers
CUSTOM DESIGN	Joint contour, heater travel and press interface
CONFIRM	HDPE grade, color, wall and weld test

Huai'an Infrared Heating Technology | YFR Infrared Heating

Custom quartz IR emitters | Heating modules | OEM integration

info@yinfrared.com
+86 138 5232 7847
www.yinfrared.com