

EXTRUDER RUPTURE DISC (ERD) SERIES

DESCRIPTION

The Fike Extruder Rupture Disc (ERD) is a pressure relief device primarily designed for overpressure protection of plastic extrusion processes. Each ERD device typically consists of a threaded tubular body with a rupture disc soldered or welded to the process end. It is necessary that the rupture disc of an extruder pressure relieving device be mounted flush with the inner wall of the extruder barrel (see figure 1). Another configuration, or improperly designed device, would present a pocket area for product build-up and hardening that could render the device totally ineffective (see figure 2).



ERD applications are unique. Each requires a specific combination of dimensions, threading and body configuration. Fike presently has an extensive line of standard ERD devices to select from or adapt, as well as the capabilities to design and manufacture to customer specifications.

The ERD device is normally mounted directly to the extruder through a pressure port or thermocouple well where critical pressures are experienced. Standard burst diameters available range from 3/16" (DN 4.5) to 1 3/4" (DN 45). Larger sizes, up to 6" (DN 150) in diameter, have been provided on a special order basis.

The minimum burst pressure available for a 3/16" (DN 4.5) diameter ERD is 1500 psig (104 barg). Maximum available burst pressures are 12,000 psig (830 barg) at 800°F (425°C) for soldered units. Higher pressures and temperature ratings may be achieved with a welded design. ERD burst pressures are subject to a standard +6% to -3% manufacturing design range and a ±5% rupture tolerance. Reduced ranges are available upon request.

Standard materials of construction are stainless steel for the body and Inconel® 600 for the rupture disc. Other materials are available upon request.

When ordering ERD devices specify: Body configuration, body dimensions with thread specifications (refer to figure 3 for required dimensions and thread specifications), required burst pressure at the coincident temperature, operating pressure and temperature. When reordering, specify the lot number or part number of the unit being replaced or repaired.

FIGURE 1

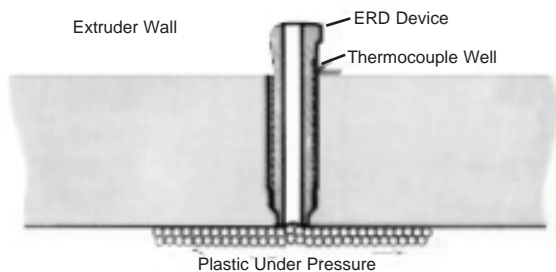
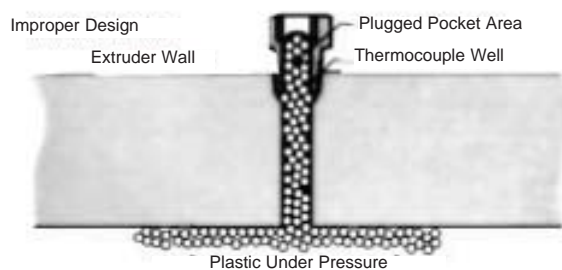


FIGURE 2



Form No. R.1.33.01

FIGURE 3

