



1. Application

This quick release system provides automatic disconnection of a loading arm in the event of a tanker accidentally driving away. Simultaneously the product flow will be shut off both upstream and downstream of the disconnection point.

The system can be used on a variety of loading applications.

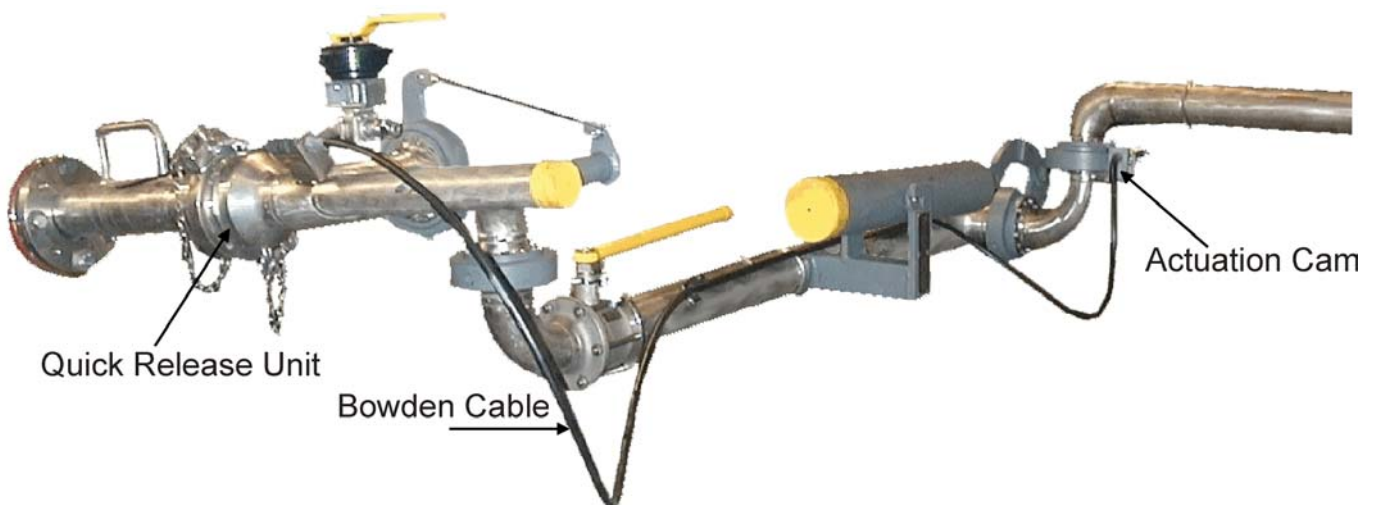
2. Description

The main components of the systems are:

- release unit with integral shut off valves
- mechanical release mechanism
- shear pin

The quick release unit is fitted as an integral part of the outboard end (B-dimension) of the loading arm. Both valves are clamped together by a collar assembly. The actuation cam fitted to the double swing joint activates the collar release via the bowden cable.

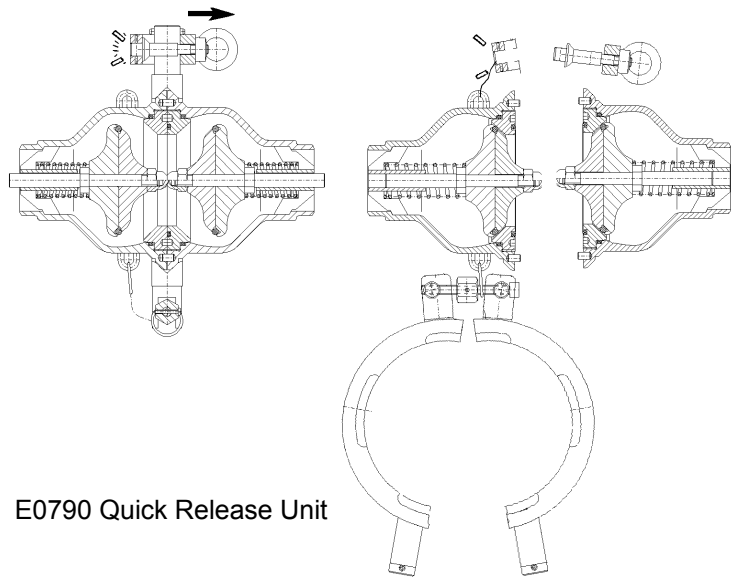
Also fitted to the double swing joint is a shear pin which prevents accidental release whilst manoeuvring the loading arm.



3. Method of operation

If the loading arm is pulled outside of its safe working envelope, while connected, the following sequence of events will take place:

- The shear pin is broken
- The actuating cam is then allowed to pull the bowden cable.
- This shears the locking pin, opening the collar, and the quick release unit separates into two halves.
- Both spring loaded shut off valves close.
- With the outboard end of the arm released, the counter-balance of the arm is affected and the arm will move vertically back to the parked position.



E0790 Quick Release Unit

Following an emergency release we recommend that reassembly is carried out by authorized personnel (EMCO service engineer). To carry this out both the loading arm and the disconnected outboard end must be drained of product. The outboard end must be removed from the tanker, and the quick release unit reassembled in accordance with Operation and Maintenance Manual. New shear and locking pins must be fitted.

4. Technical Data

- Release unit:
 - Material: stainless steel ASTM A 316
 - Seal: EPDM
 - Working pressure: PN 40

