



NT92 Series Omega™ Quick Couplings

Serving The Nuclear Industry

Canada 
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NT92 Omega™ Dry Break Quick Coupling



The NT92 Omega™ Series Dry Break Quick Coupling is specifically designed to prevent radioactive resin valve blockage spillage during the disconnecting process. This unique coupling consists of a female end having a concave ball valve and a male end having a convex ball valve that are machined to eliminate any spaces between the ball valves. Added to the design is a cavity filler and a revolutionary sealing process. The seal is in tension not compressed yielding a superior seal with greater strength and longer cycle life. Thorburn's NT92 Omega™ coupling provides the solution to resin blocking poppet type valve quick couplings which spill radioactive materials.

NT92 Omega™ Easy to Operate

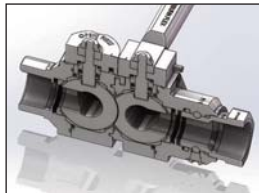
The NT92 Omega™ coupling has an easy turn action to connect and start the product flow. The valves will not open until both coupling halves are connected properly. The coupling halves are first aligned and then connected with a push, followed by a quarter turn. There are no threads to damage by over tightening and no failure prone cam and groove latch connections to secure. The coupling halves are independent shut off ball valves that are controlled manually by rotating the valve handles in sequence providing unrestricted high flow in either direction.



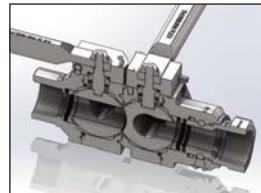
Align coupling halves



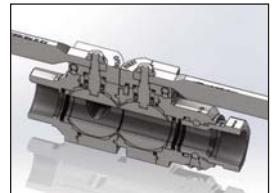
Push together & turn 90°



Coupling connected & locked



Open male end valve



Open female end valve

The Omega™ can only be disconnected when both the valves are shut off in sequence; female end valve first and then male end valve second. This ensures zero spillage and protects against accidental disconnection.

Eliminate Spillage with NT92 Omega™ Dry Break Quick Coupling



Cam & Groove Type = Spillage



Ordinary Ball Valves Added = Spillage



Traditional Poppet Valves = Spillage

Cam and Groove type couplings are incapable of avoiding spillage and vapor leakage upon disconnection. They are prone to accidental disconnects which can be expensive and extremely hazardous.

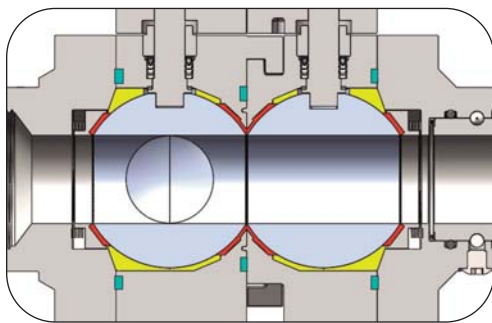
Ordinary Ball Valves added to quick couplings to shut off the flow allow trapped liquid between the hose and the adapter to flow freely on to your plants floor or your employees hands upon disconnection.

Traditional two-way poppet valve style dry break couplings by its very design are predisposed to spills because of the unavoidable liquid that is trapped in the gap between the coupler poppet valve and the adapter poppet valve upon disconnection.

Prevents Resin Valve Blockage & Disconnection Spillage

The NT92 Omega™ is a drip free hose quick coupling that minimizes exposure to fluids or vapors during fluid transfer. The full flow smooth bore design means better flow for highly viscous fluids. A quarter turn of the ball valve securely seals the process fluids within the line. The unique locking mechanism prevents accidental disconnects. The standard swivel end eases alignment regardless of hose orientation.

- Built in swivel eases alignment regardless of hose orientation.
- Unrestricted high flow during operation reduces pressure drops.
- Ideal for use where spillage may cause undesirable conditions.
- Protects the installation assets from hazardous waste product.
- Eliminates chemical waste incineration and disposal costs.
- Reduces liability exposure, loss time and worker comp claims.
- Ideal for high purity chemicals transferred through hoses.
- Zero spillage during disconnection & eliminates hazardous chemical waist pollution.
- No accumulation of D₂O resins or other solids suspended in the media & prevents resin blockage between the valves.



NT92 Omega™ Sealing Technology

Seals under temperature & pressure fluctuations

Cavity Filler - Prevents flow accumulation between ball valve and coupling body. Reduces spillage when disconnecting and prevents solids from being trapped between the rotating ball valves.

Ball Valve Seal - Flexible arch shaped ball valve seal provides constant sealing pressure and compensates for machining tolerances.

Spring Enhanced O-Ring Seal - Puts constant pressure around the stem and eliminates leaks through the valve handle stem.

Operational Safety Features

has built in safety features which requires a deliberate sequential procedure by users during operation.

- **Ball Valve Zero Gap System** (Convex (male end) & Concave (female end)) prevents hazardous chemical loss during disconnection.
- **Valve Handle Locking System** locks the handle in the off position to safeguard against accidental opening when disconnected.
- **Safety Locking Mechanism** incorporates a Valve Handle Safety Locking Pin to prevent accidental openings.
- **The Locking Pin** is guided by the Valve Handle on the male end coupler into the **Locking Pin Slot** on the female end coupler.
- **Locking Pin Slot** (female end) locks the coupling halves together and protects against accidental disconnection during operation.



Ball valve "Zero Gap" system



Valve handle locking system



Safety Locking Mechanism



Locking Pin



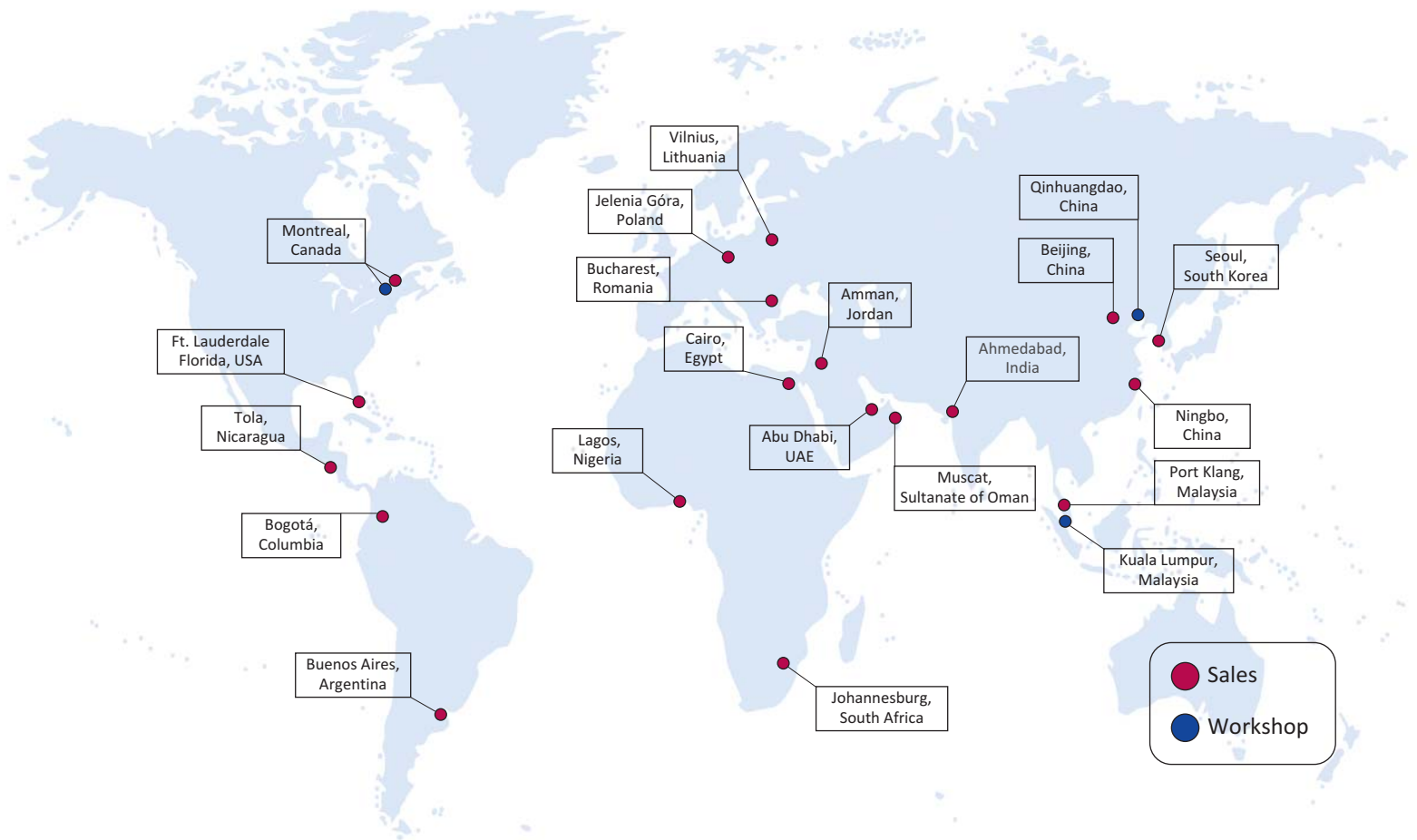
Locking Pin Slot

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Thorburn's Global Presence



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