Parker Quick Coupling Division
Non-Spill Product Guide

The Basics

What is a Non-Spill Coupling?

A hydraulic coupling set with flush face valving to reduce spillage upon disconnection.

Why use a Non-Spill Coupling?

Spillage – Flush face valving significantly reduces spillage compared to a ball or poppet style coupling. Disconnection of a non-spill coupling results in an oil film on the face of each mating half rather than a larger volume oil. Customer benefits from minimal spillage:

- **Environmental Impact** - Limits liability to environmental fines and soil contamination
- **Appearance** – Eliminates dirt buildup from spillage leading to a cleaner work environment and cleaner equipment
- **Cost Savings** – Reduces cost of replacing oil lost to spillage and undocumented costs of cleanup (rags, oildry, etc)

Contamination – Flush face valving offers superior protection for the locking mechanism and critical sealing areas.

- **Air** – Minimizes control issues and/or damage to system components caused by aeration of the fluid
- **Debris** – Flush face couplings are easy to wipe clean prior to connection to minimize damaging debris inclusion

Push-to-Connect – Flush face valving allows coupling halves to be connected with one hand.

Screw-to-Connect – Flush face valving allows coupling halves to be connected with mechanical advantage reducing operator effort.

Connect-Under-Pressure – Coupling set that allows connection despite trapped or residual pressure.

FEM / FEC Series

Body Sizes:
¼", 3/8", ½", 5/8", ¾", and 1"
Operating Pressure:
2900-4568 psi
Connect Under Pressure:
FEC Male Only
Up to 3000 psi for ½"
Disconnect Under Pressure:
Not Available
Plating: Zinc Chromate

Jumping Off Point:
- Customer upgrading from poppet style to reduce spillage
- Replacing competitive non-spill

ISO16028 Interchange:
- 3/8", ½" and ¾" sizes are most common in marketplace
- Direct Interchange with multiple manufacturers
- Most common interchange for construction equipment

Push-To-Connect Design:
- Simple push-to-connect
- Pull back sleeve-to-disconnect

FEC Male Option Available:
- Connect under trapped pressure on male half
- Pressure is equalized between the two halves during connection
- Allows for connection of pressurized male with unpressurized female

Other Considerations:
- Parker FEM Series is rated to ISO standard by size – Competitors rate as high as 10,000 psi
- Parker FEM Series is steel with Zinc Chromate plating standard – some competitors have zinc nickel plating and brass or stainless steel versions

The Applications

- **Skid Steer Attachments (#1)**
- **Skid Steers, Mini-Excavators, Wheel Loaders and other Compact**
- **Construction Equipment**
- **Heavy Duty Turf**
- **Mower Attachments**
- **Compact Tractor Attachments**
- **Hydraulic Hand Tools**
- **Snow Plows**

The Competition

CEJN X64/X65
Dixon HT
DNP FF-GP/FFK
Eaton FD89
Faster FFH/FFI
Holmbury HQ
Stauff FF
Stucchi A/FIRG
Tomco FE
Voswinkel FF

FET Series

Body Sizes:
3/8", 1/2", 5/8", 3/4", 1", 1-1/2" and 2"
Operating Pressure:
5000-6000 psi
Connect Under Pressure:
Standard up to 5000 psi
Disconnect Under Pressure:
Up to 2500 psi
Plating: FNC Plating

Jumping Off Point:
- Upgrading from a push-to-connect non-spill product due to short replacement intervals and/or failures
- Replacing competitive screw-to-connect

European Screw-to-Connect:
- Not an ISO / SAE standard interchange
- Many manufacturers interchange
- Mismatching manufacturers often adds to customer confusion

Screw-to-Connect Design:
- Threads provide mechanical advantage to reduce overall connection effort
- Threads provide superior performance for high pressure/high impulse applications

Connect-under-pressure:
- Connect under trapped pressure on both halves
- Pressure is relieved between halves by internal valving
- Allows for connection without having to relieve pressure in lines

Other Considerations:
- Non-Standard locking collar upon request. FNC plating is used by competitors and Parker for increased thread durability but less overall corrosion resistance

The Applications

- **High Impulse attachments** (Jackhammers, pile drivers, etc)
- **Municipal Equipment**
- **Cranes**
- **Portable Power Unit**
- **Forestry Equipment**
- **Rock Crushers**
- **Tunnel Boring Machines**
- **Oil and Gas Applications** (Frack Trucks, Artificial Lifts, Top Side Drives, Coiled Tubing Reels, etc)
- **Military Equipment**

The Competition

Dixon VEP
DNP FSI
Eaton FD96
Faster FHVFR
Holmbury HFT
Stauff FT
Stucchi VEP/VEPHD
Voswinkle FT

59 Series

Body Sizes:
½", ¾", 1" and 1-½"
Operating Pressure:
5000-6000 psi
Connect Under Pressure:
Standard up to 5000 psi
Disconnect Under Pressure:
Up to 2500 psi
Plating: Zinc Nickel

Jumping Off Point:
- New system designs
- Upgrading from interchangeable screw-to-connect product

Double Start Acme Threads:
- Connection in 2-1/2 turns vs 8-10 turns

Internal Bearing 'Swivel':
- Relieves hose twist and allows for quicker connection

Connection Feedback:
- Visual and tactile feedback when fully connected

Zinc Nickel Plating:
- Extended product life in corrosive environments.
- Twice the life to red rust compared to standard zinc plating
- Extended replacement intervals

Other Considerations:
- Not interchangeable with FET Series
- Field replacements of European Screw-to-Connect requires both halves

The Applications

- **High Impulse Attachments** (Jackhammers, pile drivers, etc)
- **Municipal Equipment**
- **Cranes**
- **Portable Power Unit**
- **Forestry Equipment**
- **Rock Crushers**
- **Tunnel Boring Machines**
- **Oil and Gas Applications** (Frack Trucks, Artificial Lifts, Top Side Drives, Coiled Tubing Reels, etc)
- **Military Equipment**

The Competition

Competes with all the FET Series competitors but does not interchange. Protect your business from competition by using 59 Series!

Application Needs Selection Chart

	FEM Series	FEC Male + FEM Female	FET Series	59 Series
Non-Spill Connection Type	✓	✓	✓	✓
Push-to-Connect ISO16028 Interchange	✓	✓		
“Euro” Screw-to-Connection Interchange			✓	
Connect Under Pressure on Male Half		✓	✓	✓
Connect Under Pressure on Both Halves			✓	✓
Disconnect Under Pressure Up to 2500 psi			✓	✓
High Flow and High Pressure (varies by size)			✓	✓
High Vibration or Flow Impulses			✓	✓
Increased Tolerance to Debris			✓	✓
Increased Corrosion Resistance				✓
Decreased Connection Time				✓
Relieves Hose Twist				✓

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