

FIELD REPLACEABLE CONNECTOR SYSTEM (FRCS)

Carriage and release interface solutions

FRCS is a jam-resistant weapon interface connector mated with a flexible, compact, damage-resistant cable assembly that offers low and consistent ejection loads.

FRCS-equipped umbilicals provide a permanent solution to the degraded operational capability experienced during smart MIL-STD-1760 weapon releases. It counters the extremely high separation loads and low harness life universally experienced with the screw-on MIL-DTL-38999/31 lanyard-operated snatch connector. The unit also eliminates the unacceptable risk of damage to the pylon and released weapon.

The push-to-fit design does not require any modification to the mating weapon

or aircraft, allowing legacy interfaces and specialized weapon test equipment to be retained. Umbilical life has been demonstrated and certified to be in excess of 100 ejected releases.

FRCS can be repaired or replaced in the field. The push-to-fit design also aids mating to recessed or non-visible connectors. Currently being used on several major international aircraft platforms, FRCS is widely recognized as a smart weapons interface standard with an excess of 3,500 failure-free weapon drops.



BENEFITS

- > Improves mission success and saves on maintenance by eliminating damage to pylon or weapon during separation
- > Allows for the reduction of spare umbilicals and improvements in turnaround and sortie rate with guarantee to achieve 100 releases
- > Reduces aircraft down time by enabling in-air repair of damage sustained during day-to-day use
- > Decreases sortie turnaround time with push-to-fit connectors that assist crews in loading modern “low observable” weapons with recessed connectors



PLATFORM APPLICATIONS

FRCS-equipped umbilicals are certified for continuous use on the following platforms:

- > A-10C Thunderbolt II
- > B-1B Lancer
- > F-15E Strike Eagle
- > F-16 Fighting Falcon-BRU-57 Smart Rack
- > F/A-18 Hornet
- > F-22 Raptor
- > F-35 Lightning II
- > Gripen
- > Tornado IDS
- > Typhoon
- > Lynx Mk.140
- > AW159 Wildcat HMA Mk.2

The umbilicals are currently undergoing certification for the F/A-18 BRU-55.

WEAPON APPLICATIONS

FRCS has also been successfully field-tested with the majority of current NATO MIL-STD-1760 stores and interfaces including:

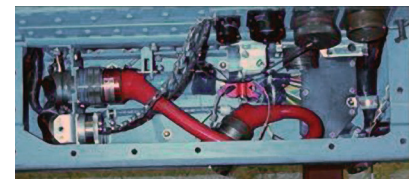
- > Enhanced Paveway™
- > Paveway™ IV
- > Joint direct attack munition (JDAM)
- > Storm Shadow
- > Miniature munition store interface (MMSI)
- > Joint miniature munition interface (JMMI)

TECHNICAL DATA

- > Average release load: 550 + 85 N (125 + 20 lbf)
- > Maximum release load: 880 N (200 lbf)
- > Tested to average and maximum release loads above during ejected pit releases (up to 5 m/s)
- > Operational temperature range: -60°C to +90°C
- > Survivable temperature: 150°C
- > Operational to MIL-STD-810E
- > Certified for 500 manual disconnects
- > Can be retained by bale bars, fixed strong points or connector retention units
- > Available in MIL-DTL-38999 equivalent finishes:
 - Class F (electroless nickel)
 - Class W (cadmium over nickel)
 - Class T (nickel PTFE) and Class Z (black zinc) under development
- > Available in MIL-DTL-38999 shell size 15, 17 and 25 with full range of insert arrangements
- > Supported by a wide range of accessories, including:
 - Adjustable lanyard
 - Reduced pull-off stowage rings
 - Electromagnetic compatibility (EMC) dust caps
 - Training umbilical and rings



FRCS APPLICATION ON
SMART TWIN STORE CARRIER



F-16 INSTALLATION

FRCS DS8107 MC

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