

03. TECHNICAL SPECIFICATIONS

DUPLICATE

3 TECHNICAL SPECIFICATIONS

3.1 Introduction:

Dry Disconnect Couplings (DDC) with the selectivity complete requirements listed in this document is intended to install on the railway tank wagons (RTW) and Gasoline 92 UNL, Gas oil and Kerosene loading and unloading points. Tank units will be directly fixed on the RTWs, and hose units to be fixed to hose assemblies.

All items supplied shall be suitable to be used in tropical climatic condition such as that in Sri Lanka.

3.2 Product Data:

Gasoline 92 UNL

Density range at 15 ^o C	: 0.720 to 0.785
Flash Point (Min ^m)	: -40 ^o C

Gas oil

Density range at 15 ^o C	: 0.820 to 0.860
Flash Point (Min ^m)	: 55 ^o C
Viscosity @ 40 ^o C (Max ^m)	: 1.5 to 5 cSt

Kerosene

Density range at 15 ^o C	: 0.775 to 0.840
Flash Point (Min ^m)	: 38 ^o C
Viscosity @ 40 ^o C (Max ^m)	: up to 8 cSt

3.3 Climatic Data:

Minimum ambient temperature	: 10 ^o C
Average ambient temperature	: 30 ^o C
Maximum ambient temperature	: 40 ^o C
Minimum relative humidity	: 66%
Maximum relative humidity	: 98%

3.4 Specification for 3" Dia. Industrial Type Self Sealing Female Dry Break/Disconnect Coupling with the option of selectivity (Hose Unit – BSPP Thread)

“Hose Unit - 3” DDC (Dry Disconnected Coupling)”

Material	: Aluminium alloy
Max working Pressure	: 10 bar
Achievable Flow rate	: up to 2000LPM
Coupler connection	: Bayonet Type of connector
Coupler outer diameter	: 120 mm (Approximate)
Thread connection	: 3” BSPP Female

Length	: less than 200 mm
Seal	: FPM (Viton)
Compliance Standard	: NATO STANAG 3756 or equivalent
Application/Service	: To be fixed to loading and unloading flexible hoses of railway Tank Wagons transporting Gasoline 92 UNL, Gas oil and Kerosene (From Pumping Gasoline 92 UNL, Gas oil and Kerosene)

Features:

- Double Handle,
- with the option of Selectivity
- Integral Swivel,
- Self-locking,
- Aluminium Dust plug with Chain (Polyethylene dust plug also accepted)
- Zero spillage,
- Valve to open and close automatically, on connection and disconnection
- Interlock safety mechanism for connection and valve operation.
- Valve to close automatically before disconnection and shall be fail safe
- Extremely reliable and safe
- Robust construction
- Simple single action operation



- Coupling should be according to EN14420 and it shall be manufactured by forging and also it should be engraved ISO/EI standard, serial no. , date of manufacture & name of manufacture. Operating temperature 5° C to 50° C.

3.5 3” Dia. DDC Dust Plugs for 3” Dia. Hose Units

Dust plug for Hose Unit - 3” Dia. DDC (Dry Disconnected Coupling)
 Aluminium Dust plug with Chain (Polyethylene dust plug also accepted)



3.6 Specification for 3” Dia. Industrial Type Self Sealing Male Dry Break/Disconnected Coupling with Flange (Tank Unit)

“Tank Unit-3” DDC (Dry Disconnected Coupling)”

Material	: Aluminium Alloy
Flange Connection	: 3” ANSI B 16.5 150 FF (3” ASA150 Flat Face)
Max Working pressure	: 10 bar
Coupler Diameter	: Around 120 mm (Male of Female coupler of item 04 of specifications)
Coupler connection	: Bayonet Type of connector (Male of Female coupler)
Length	: Less than 130 mm (Less than 140mm with dust cap)
Seal	: FPM (Viton)
Security Seal	: Sealing provisions for the dust cap and couplings to be provided
Compliance Standard	: NATO STANAG 3756 or equivalent

Features

- Non-Swing Type
- Self-Locking
- Aluminium Dust Cap with Chain (Polyethylene dust cap also accepted)
- Zero spillage,
- with the option of Selectivity
- Valve to open and close automatically, on connection and Disconnection
- Interlock safety mechanism for connection and valve operation.
- Valve to close automatically before disconnection and shall be fail safe
- Extremely reliable and safe
- Robust construction
- Simple single action operation

Application/Service : To be fixed to loading and unloading flexible hoses of railway tank wagons from pumping Gasoline 92 UNL, Gas oil and Kerosene.



Coupling should be according to EN14420 and it shall be manufactured by forging and also it should be engraved ISO/EI standard, serial no. , date of manufacture & name of manufacture. Operating temperature 5° C to 50° C.

3.7 3" Dia. DDC Cups for 3" Dia. Tank Units

Dust cup for Tank Unit - 3" DDC (Dry Disconnected Coupling)

Aluminum Dust Cap with Chain (Polyethylene dust cap also accepted)



3.8 Technical Specification for 3" Dia. RTW Hose

3" Dia. RTW Hose

3" inch diameter Petroleum Product Refueling Hose, One side 3" inch BSP Tin plated brass Male coupling with bolted clamps and other side 3" inch BSP Tin plated brass Female coupling with bolted clamps.

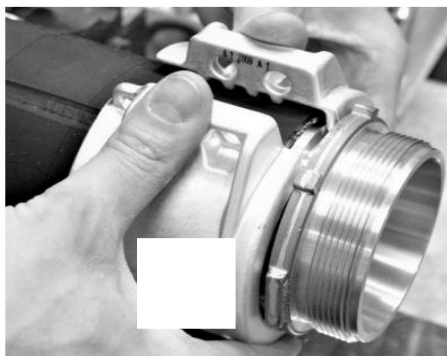
Test certificate shall be provided according to EN 10204-3.1

ISO 1825: 2017 / EI 1529 7th edition Type-C Outer cover of the hose should be seamlessly extruded CR-Rubber to withstand Ozone, Weather & abrasion and inner lining of the hose should be seamlessly extruded NBR-Rubber to resist for Gasoline 92 UNL, Gas oil and Kerosene.

Hose shall be embossed that showing all met standards, serial No, Date of manufacture, electrical conductivity, batch No. and name of manufacture.

With hose assemblies

******Hose assemblies need to be pre-fixed on the RTW hose, which can easily connect to the hose unit (Hose unit 3" DDC (Dry Disconnected Coupling)).**



3.9 Pre-Shipment Confirmation and Compliance

1. Third Party Pre-shipment Inspection (TPI) shall be arranged by the supplier by one of the following third-party inspection institutions which is to be approved by CPSTL witnessed by two (02) user function officers CPSTL at the manufacturer's shop before shipment.
 - i. DNV
 - ii. SGS
 - iii. BV
 - iv. Lloyds
 - v. Amspec
 - vi. Intertek
2. Supplier shall arrange return air tickets, visa, accommodation, meals and transportation for two (02) user function officers witnessing the testing and inspection of accessories attended by third party and all relevant expenses shall be borne by the supplier.
3. The manufacturer shall obtain prior confirmation from Ceylon Petroleum Storage Terminals Limited (CPSTL) before shipping the products.
4. The manufacturer must ensure that the products fully comply with the required technical specifications as outlined in this document.
5. The manufacturer shall submit a compliance report, test certificates, and any other necessary documentation to CPSTL.
6. Shipment shall proceed only after receiving written confirmation from CPSTL.
7. Any non-compliance identified during pre-shipment verification must be rectified by the manufacturer at their own cost before obtaining approval for shipping.

3.10 Country of Origin and Manufacture for above mentioned all Products:

USA, UK, Europe, Canada, Australia and Japan only.

Signature of the Bidder:

Date:.....

Company Seal (Rubber Stamp)