



Liquid Transfer Srl

# BOTTOM UN/LOADING ARMS

## series 1403

### Technical specifications

DOC: 1403\_01\_EN REV: 01-09/2017



The bottom loading arms series 1403 are designed to load or unload the tanker while remaining on the ground level, where it is necessary to have a wide range of action available. This allows maximum covering of the loading points.

#### Standard configuration

- **Right-Hand Layout, bottom inlet, ANSI 150 connection flange**
- **Carbon steel F-20 style flanged swivel** with double row of ball bearings.
- **Carbon steel boom pipe**
- **Double base swivel with Style F-50:** for horizontal and vertical rotations with FKM seals.
- **Compressed spring piston type balancing system**
- **Secondary pipe** in aluminium
- **End Double swivel F-50 style** : for vertical and horizontal rotations to allow easy connection of the API coupler
- **Terminal aluminium pipe with a 4" API RP 1004 in aluminium alloy** with seals in FKM.



#### Standards and Regulations

- Conformity Declaration of current Directive **PED** for Pressure Equipment
- Conformity Declaration of current Directive **ATEX** for Equipment used in Potentially explosive atmospheres
- Conformity Declaration of current Directive **MACHINERY**
- Customs Declaration of certification for Russia, Kazakhstan, Belarus, **EAC certification**.
- Standard **API-ASTM-ANSI-TTMA**.

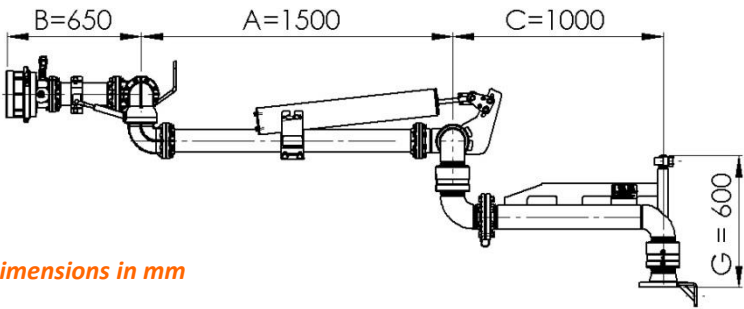
Technical features				
Nominal diameter		3"	4"	6"
Fluid type		Hydrocarbons		
Nominal flow rate [flow speed: 4.5 m/s]	m <sup>3</sup> /h	70	120	280
	l/min	1200	2000	4700
Max flow rate [flow speed: 5.3 m/s]	m <sup>3</sup> /h	82	150	310
	l/min	1400	2500	5200
Design temperature		-15°C / +65°C		
Weight (Kg)		130	160	300
Design pressure		10 bar		
Test pressure		15 bar		

### Accessories

- Check valve
- ERC Dry-break emergency valve
- Flow indicator
- Loading position Micro
- Park position Micro
- Mechanical park
- Stand-post



ERC-100 Dry-break Emergency valve



### Dimensions in mm

- A = 1200-2500 (Std 1500)
- B = 650-1000 (Std 650)
- C = 1000-2000 (Std 1000)

(Dimensions can be customized)

### Standard documentation

- Declaration of conformity to regulations
- Declaration of material conformities and functional test (CCC)
- Operation and maintenance manual (MUM)

### Options on request

- **Arm material options:** all made of carbon steel, stainless steel AISI 304 or AISI 316.
- **Seals in HNBR, FFKM, PTFE**
- **Left version**
- **Upward inlet flange**
- **Base swivel in-let flange PN16**
- **Split Type swivels:** 3-pieces to facilitate maintenance.
- **Torsion spring piston balancing**
- **Steam Jackets or electric tracing**
- **Special configurations** for extreme temperatures (-60/+200 °C)



Semiautomatic API RF1004 Coupler

### Documentation on request

- **Welding dossier (WB):**
  - Welding map (WM)
  - Welding qualification (PQR)
  - Welding specifications (WPS)
  - Welder qualification (WQ)
  - Penetrant liquids test on fillet welds
  - Radiographs of welding heads
- **Materials specifications map (MIM):**
  - Certification 3.1 EN 10204 for steel
  - Certification 2.2 EN 10204 for aluminium
- **Quality complete plan (QCP):**
  - Welding dossier (WB)
  - Materials identification map (MIM)
  - Manufacturing plan