

# BOTTOM LOADING UNLOADING ARMS

## Series 1403

### Technical specifications

**silea**

Liquid Transfer Srl



The Silea 1403 serie is used to bottom load and unload road tanker and rail-wagons. This type of loading system offers the advantage of being able to operate directly on the ground level and moreover, it prevents the formation of electric static. The arm is equipped with an API RF 1004 4 inch coupler and is widely used on single loading-unloading skids mostly with a stand-post.

#### Standard configuration

- **Bottom ANSI 150 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.



#### Technical features

Nominal diameter	3"	4"	6"	
Fluid type	Hydrocarbons			
Nominal flow rate <i>[flow speed: 4.5 m/s]</i>	m <sup>3</sup> /h	70	120	280
	l/min	1200	2000	4700
Max flow rate <i>[flow speed: 5.3 m/s]</i>	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			

#### Law and regulation

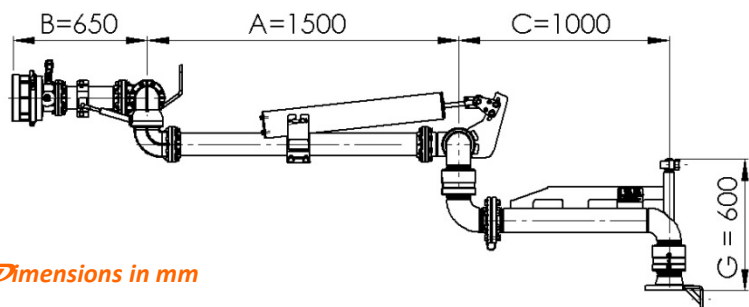
- **94/9/CE** Directive, named **ATEX**.
- **97/23/CE** Directive, named **PED**.
- Customs declaration of certification for Russia, Kazakhstan, Belarus, **EAC certification**.
- Standard **API-ASTM-ANSI-TTMA**.

## 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 in-let 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