# BOTTOM LOADING ARM
## Series 1405
## Technical specifications

Liquid Transfer Srl

**DOC:** 1405_01_EN **REV:** 01-09/2017

MADE IN ITALY

*The bottom loading arm series 1405 are used to charge tankers through the flexible vertical section when the inlet flange is high but the operator is on the ground. It is possible to create loading station, thanks to their configuration, to supply different products at the same time.*

### *Standard configuration*

- **Double base swivel F-50 style in carbon steel** : used for horizontal and vertical rotations
- **Carbon steel boom pipe** .
- **Balancing system:** compressed spring piston
- **Intermediate aluminium F-40 style swivel** : It is used to keep the hose in vertical position
- **Vertical flexible conductive hose, compliant to EN 12115 directive:** resistant to hydrocarbons with up to 50% aromatics contents and unleaded gasoline with maximum 15% MTBE in standard version.
- **Bottom end aluminium F-30 style swivel :** used to keep the coupler in horizontal position.
- **4" API RP 1004 Coupler in aluminium alloy with seals in FKM.**

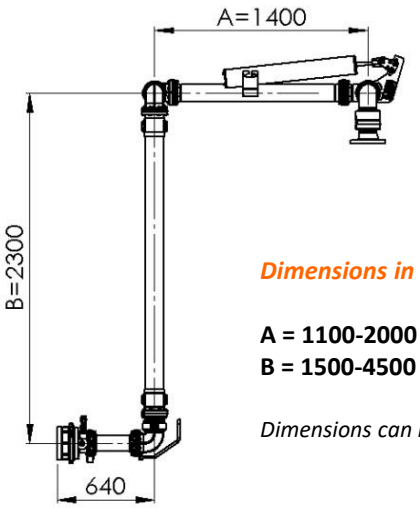
### *Standards and Regulations*

- 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" |
| Fluid type | | Hydrocarbons | |
| Nominal flow rate [flow speed: 4.5 m/s ] | $m^3/h$ | 70 | 120 |
| | l/min | 1200 | 2000 |
| Max flow rate [flow speed: 5.3 m/s ] | $m^3/h$ | 82 | 150 |
| | l/min | 1400 | 2500 |
| Design temperature | | -15°C / +65°C | |
| Weight (Kg) | | 130 | 160 |
| Design pressure | | 10 bar | |
| Test pressure | | 15 bar | |

## *Accessories*

- **Check valve**
- **ERC Dry-break emergency valve**
- **Flow indicator**
- **Loading position Micro-switch**
- **Park position Micro-switch**
- **Mechanical park**
- **Stand-post**
- **Stainless steel Protection Jacket**



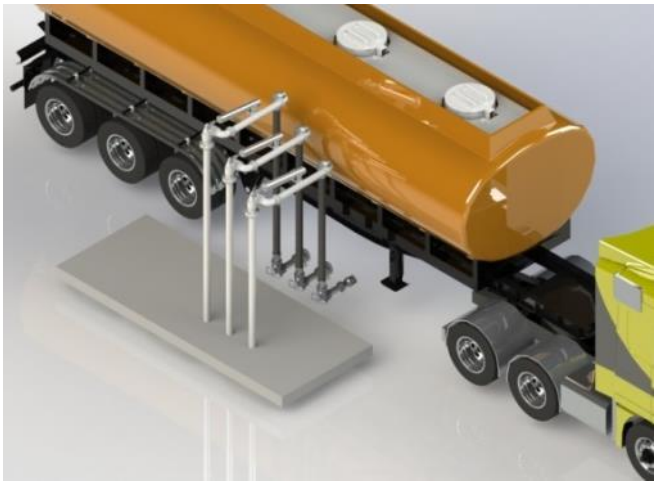

### *Dimensions in mm*

**A = 1100-2000 (std 1400)**
**B = 1500-4500 (std 2300)**

*Dimensions can be customized.*

## *Options on request*

- **Arm material**: all made of carbon steel, stainless steel AISI 304 or AISI 316.
- **Seals in HNBR, FFKM, PTFE**
- **Left version**
- **Upward product inlet**
- **Connecting flange PN16**
- ***Split Type* junctions:** 3-pieces to facilitate maintenance.
- **Coupler 4" semiautomatic API RP 1004**
- **Coupler Stanag 3756**
- **Rigid vertical pipe**
- **Avio fuels version, with hose compliant to EN 1361 Type C Directive**
- **Special configurations** for extreme temperatures (-60/+200 °C)



## *Standard documentation*

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

*API RF 1004 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

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