

VARIABLE REACH TOP LOADING ARM

Series 1101

Technical specifications

silea Liquid Transfer Srl



The 1101 serie are variable reach scissor type top loading arms used in most Oil Terminals to load road tankers. The Silea 1101 loading arms are balanced by adjustable torsion spring or compressed spring piston. Silea 1101 arms are balanced with an adjustable torsion spring which allows an arm inclination with the horizontal axis of 55°- 60° upward and 20°- 30° downward. Optionlly the 1050 can be also balanced with a compressed spring piston

Standard configuration Components

- **Right version with ANSI 150 flow connecting flange from the bottom**
- **Double swing base swivel style F-50:** It is used for horizontal and vertical rotations. It is made with two swivel joints with double ball bearing rows and FKM seals.
- **Torsion Spring Balancing unit:** It is used to balance the loading arm.
- **Loading Valve "stay open" or "Hold Open" type** opens and closes flow and has a double stage easy opening and adjustable valve closure velocity, in relation to specific pressure and viscosity of the product being loaded.
- **Main and intermediate TTMA flanged Pipes made of aluminium**
- **Valve Remote Control**
- **Intermediate and Drop Pipe F-40 style swivels:** are between the intermediate pipe and the one on the drop pipe side has a handle and it is used to keep the drop pipe in vertical position.
- **Drop Pipe made of aluminium alloy TTMA flanged Can have deflector or end pipe**
- **Drip pan made of aluminium alloy**



Laws and regulations

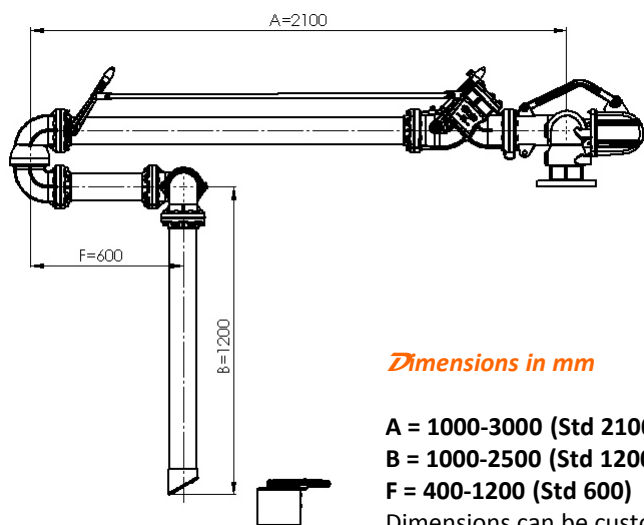
- **94/9/CE Directive, named ATEX.**
- **97/23/CE Directive, named PED.**
- **Customs declaration for Russia, Kazakhstan, Belarus, EAC certification.**
- **Standard API-ASTM-ANSI-TTMA.**

Technical features

Nominal diameter		2"	3"	4"	6"
Fluid type		Hydrocarbons			
Nominal flow rate [flow speed: 4.5 m/s]	m ³ /h	30	70	120	280
	l/min	500	1200	2000	4700
Max flow rate [flow speed: 5.3 m/s]	m ³ /h	38	82	150	310
	l/min	650	1400	2500	5200
Design temperature		-15°C / +65°C			
Weight (Kg)		70	79	97	173
Design pressure		10 bar			
Test pressure		15 bar			

Accessories

- Check valve
- Vacuum breaker valve
- Flow indicator
- Micro switch for indication of the position of loading valve
- Micro switch to indicate vertical position
- Micro switch to indicate rest position
- Mechanical lock "Hold Down" in working position
- Mechanical Park lock in rest position
- Overfill sensor with handle
- Stand-post



Dimensions in mm

A = 1000-3000 (Std 2100)

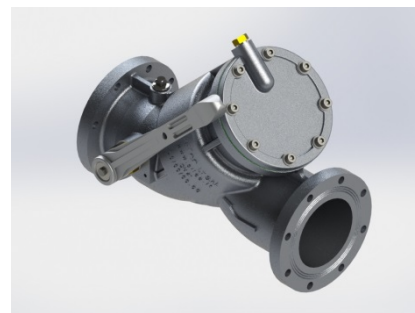
B = 1000-2500 (Std 1200)

F = 400-1200 (Std 600)

Dimensions can be customized

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.
- **Compressed spring piston balancing**
- **Loading valve with "hold open" operation** which closes automatically when the lever is released.
- **Chromium plated loading valve inside** for jet fuels.
- **"T" deflector end-pipe** in aluminium alloy
- **Steam Jackets or electric tracing**
- **Special configurations** for extreme temperatures (-60/+200 °C)



0560 serie Loading Valve

Standard documentation

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

Documentation on request

- **Welding file (WB):**
 - Welding map (WM)
 - Welding qualification (PQR)
 - Welding specifications (WPS)
 - Welder qualification (WQ)
 - Penetrant liquids test
 - 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