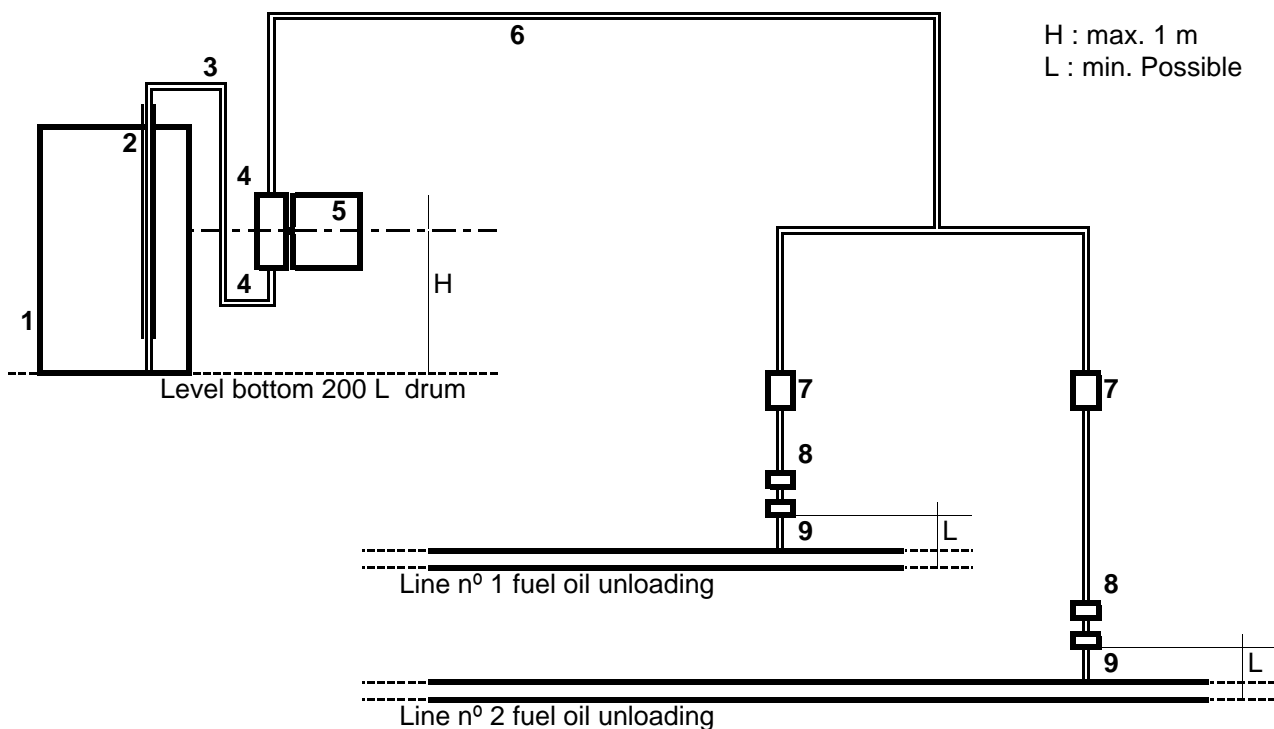


**DOSING PUMP INSTALLATION PLAN FOR "rb bertomeu" ADDITIVES**

**Norm: EQ-001**  
**Date: May-96**  
**Rev.: Mar-01**

PUMP TYPE..... RB "x" A "x" DV ( "x" = variable number )  
 FLOW ..... 0 - 100 Liters/hour , according type  
 OPERAT. PRESSURE ... 8 bar maximum



**Previous note :** Present plan considers that exist two pumps for unloading fuel oil, with two independent pipes to the storage tank. In case that the installation has only one pump and pipe, the plan is still valid but considering only one line and not installing the solenoid valves (7)

**DESCRIPTION OF INSTALLATION :**

- 1- Additive drum of 200 litres , supplied by **rb bertomeu S.L.**
- 2- Support pipe for flexible suction line to the pump, supplied by **rb bertomeu S.L.**
- 3- Flexible pump pipeline

Material : Teflon  
 Diameter : Int. = 8mm / Ext. = 10mm  
 Length : Maximum 3 m  
 Position : Pass the flexible pipeline through the interior of the support pipe, leaving the end approximately 2-3 cm from the bottom of the additive drum.

**Note:** Teflon pipeline can be changed by copper pipe, from exit drum to pump suction connection.

- 4- Compression conector 3/8" GM - 8/10mm for suction and impulsion lines of the pump  
 Material : Copper or inox

Dossier rb - Section E - 2 (drum)

- 5- Dosing pump , supplied by **rb bertomeu S.L.** (optional for the client)
- 6- Pump impulsion pipeline for conection with unloading pipe or pipes to the fuel oil storage tank  
Material : Copper or inox  
Diameter : Int. = 8mm / Ext. = 10mm  
Lengh : Maximum 50 m
- 7- Solenoid valves on-off , interlocked with each fuel oil pump motor in the way that only has to open the valve corresponding to the used pump and pipeline.  
In istallations with only one unload pump, these kind of valves are not necessary.  
Type : Gate  
Material : AISI 304  
Size : 3/8"  
Installation : Threaded 3/8" GF
- 8- Check valve , to assure that no fuel oil goes in to the additive pipe.  
Type : Ball  
Material : AISI 304  
Size : 3/8"  
Installation : Threaded 3/8" GF
- 9- Cut-out valve , to isolate the additive pipeline in case of maintenance.  
Type : Ball , quick opening  
Material : AISI 304  
Size : 3/8"  
Installation : Threaded 3/8" GF

**NOTES :**

**a) Pump lubrication :**

The pump is supplied without lubricating oil . Before use it is imperative to fill the pump following the instructions given on page 7 of the pump operation manual , wich is supplied by the manufacturer .

**b) Electrical installation :**

It is recommended to install the pump following these requirements :

-Interlock with the fueloil unloading pump, using a three position switch :  
(only two position switch if there is only one pump)

- 0 Off
- 1 On , interlinked with unloading pump nº 1
- 2 On , interlinked with unloading pump nº 2

- Interlock of solenoid valves with the corresponding fueloil unloading pump :

- Timing of the start , variable 0-60 seconds

- Timing of operation , variable 0-30 minutes

**c) Safety :**

The installation of the safety valve recommended by the pump manufacturer in the Operation Handbook , page 6 , is left to the discretion of the plant director , depending on own the safety procedures . From the point of view of the additive , such a valve is unnecessary , therefore we did not include in the assembly plan . In case of installing, follow maker instructions.