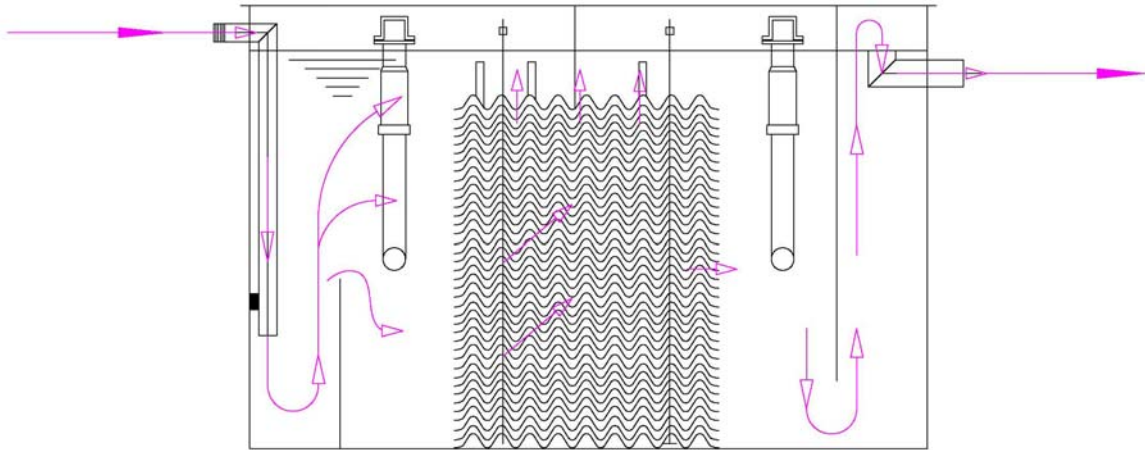


# ***OIL SEPARATOR***

**TRAMP OIL SEPARATORS FOR EXTENDING THE LIFETIME  
OF COOLANTS AND DEGREASING BATHS:**

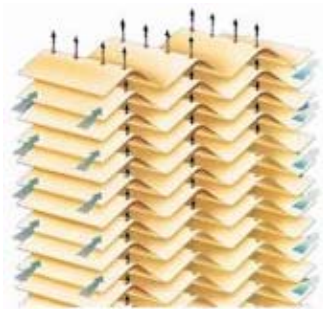
# EREVOL OIL-WATER SEPARATOR



according ON B5101

## OIL-WATER SEPARATOR

More than 5000  
units in operation!



COALESCENT PLATES



PLATE PACKS

HYDROCARBONS AND RESIDUAL OIL-WATER SEPARATOR

OIL CONTENT IN EFFLUENT WATER AFTER SEPARATOR LESS THAN 5 ppm

CAPACITIES : from 3 litres/second to 600 litres/second



## **FREYLIT Tramp oil separators for extending the lifetime of coolants and degreasing baths:**

The FREYLIT Tramp Oil Separator is a fully automated oil separator which removes tramp oil from metal working coolants and degreasing baths.

Tramp oil degrades the quality of the coolant and therefore needs to be removed frequently in order to extend the lifetime of the coolant, while preserving its working properties. The FREYLIT Tramp Oil Separator will extend the lifetime of the coolant manifold and therefore allows significant cost reductions to the operator:

- saving in purchasing new coolant AND
- saving in disposal costs of used coolant.

Coolants are stored either in sump tanks of each individual machine with a capacity of 200-500 litres, or the factory has central sump tank(s) with a volume of several thousand litres, where the coolant is collected from several machines. FREYLIT has different sizes of oil separators to cover all ranges of sump tank volumes.

### **Process Description:**

Oily water is transferred by positive displacement pump (screw pump or diaphragm pump) to the oil separator.

The heart of the oil separator are the FREYLIT coalescent plate packs.

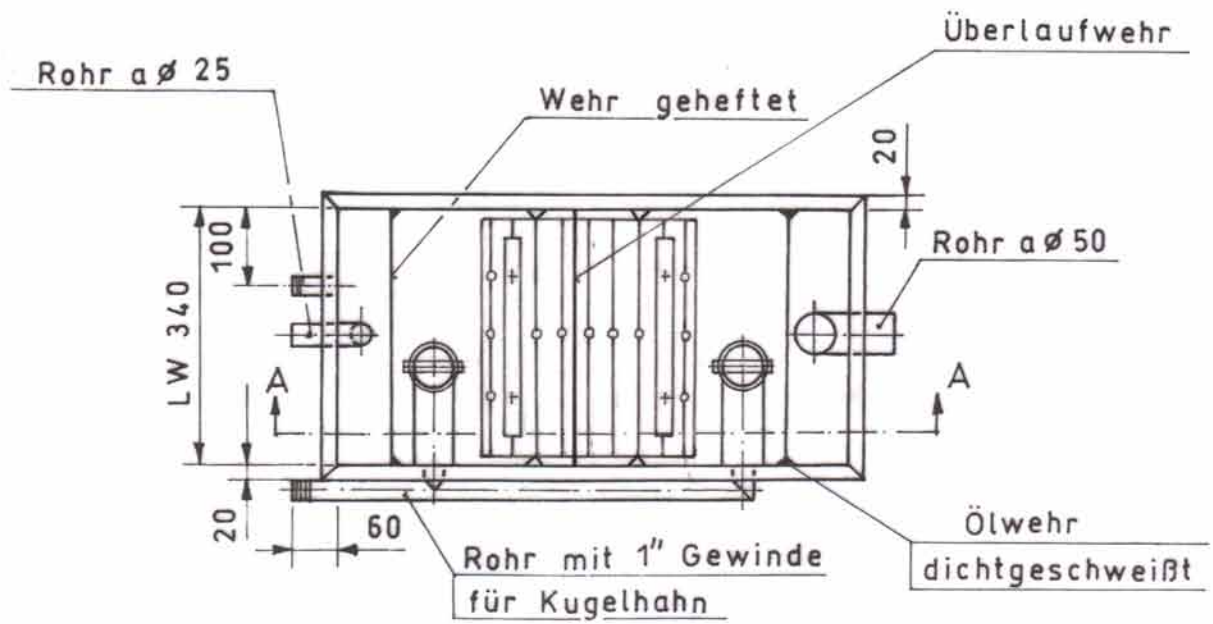
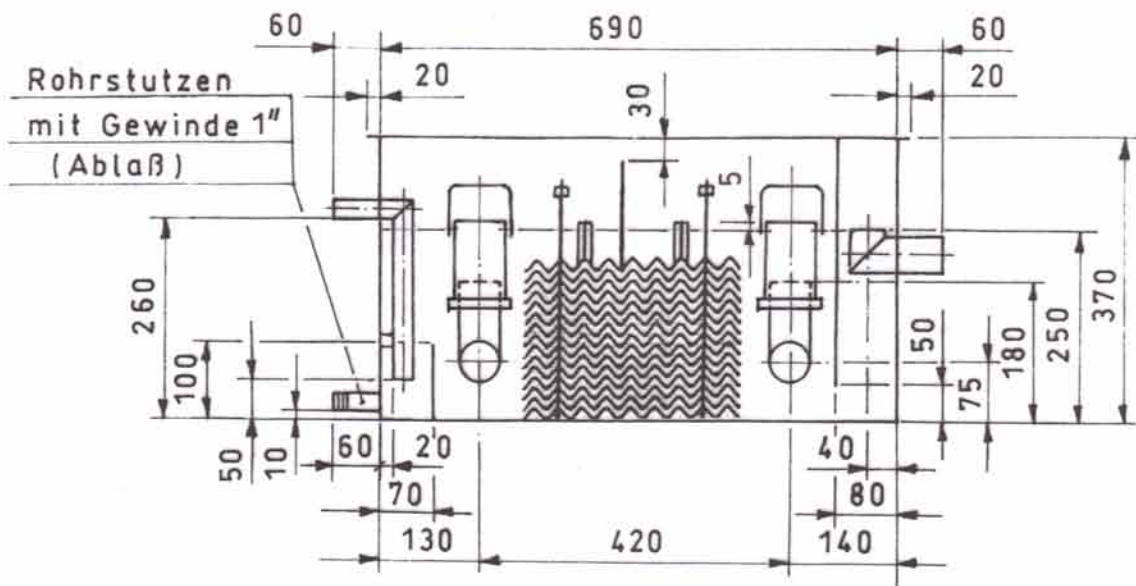
The oily water flows through the **PLATE PACK** of the separator.

Horizontal, oleophilous, **NON-ROTTABLE** corrugated plates of polypropylene are used to separate the residual oil. The corrugated plates are stacked on top of each other at a distance of 6 mm (1/4"), by means of cast-on spacers. Accordingly, an oil droplet only needs to move upwards by a maximum of 6 mm (1/4"), before it contacts the next corrugated plate, which traps the droplet.

**As soon as an oil droplet touches a corrugated plate it is separated. The droplet adheres to the underside of the corrugated plate and, on account of its specific gravity, it moves along the plate to the apex of the corrugation ridge.**

Bore holes in the apices of the corrugation ridges (diameter 12 mm (1/2")), allow the oil collected in the apices of the ridges to move upward and reach the oil collection layer. Due to the fact that corrugated plates, which are tapered at the corrugation ridges, are stacked on top of each other, the oil-containing water moves along the corrugated plates at varying speed. This results in additional particle collisions (possibility to coalesce) of bigger and smaller oil droplets. The droplets become bigger, on account of these particle collisions, which accelerate their upward movement, so that they are consequently trapped by the corrugated plates. The plates have a length of 590 mm (2').

# SCHNITT A-A

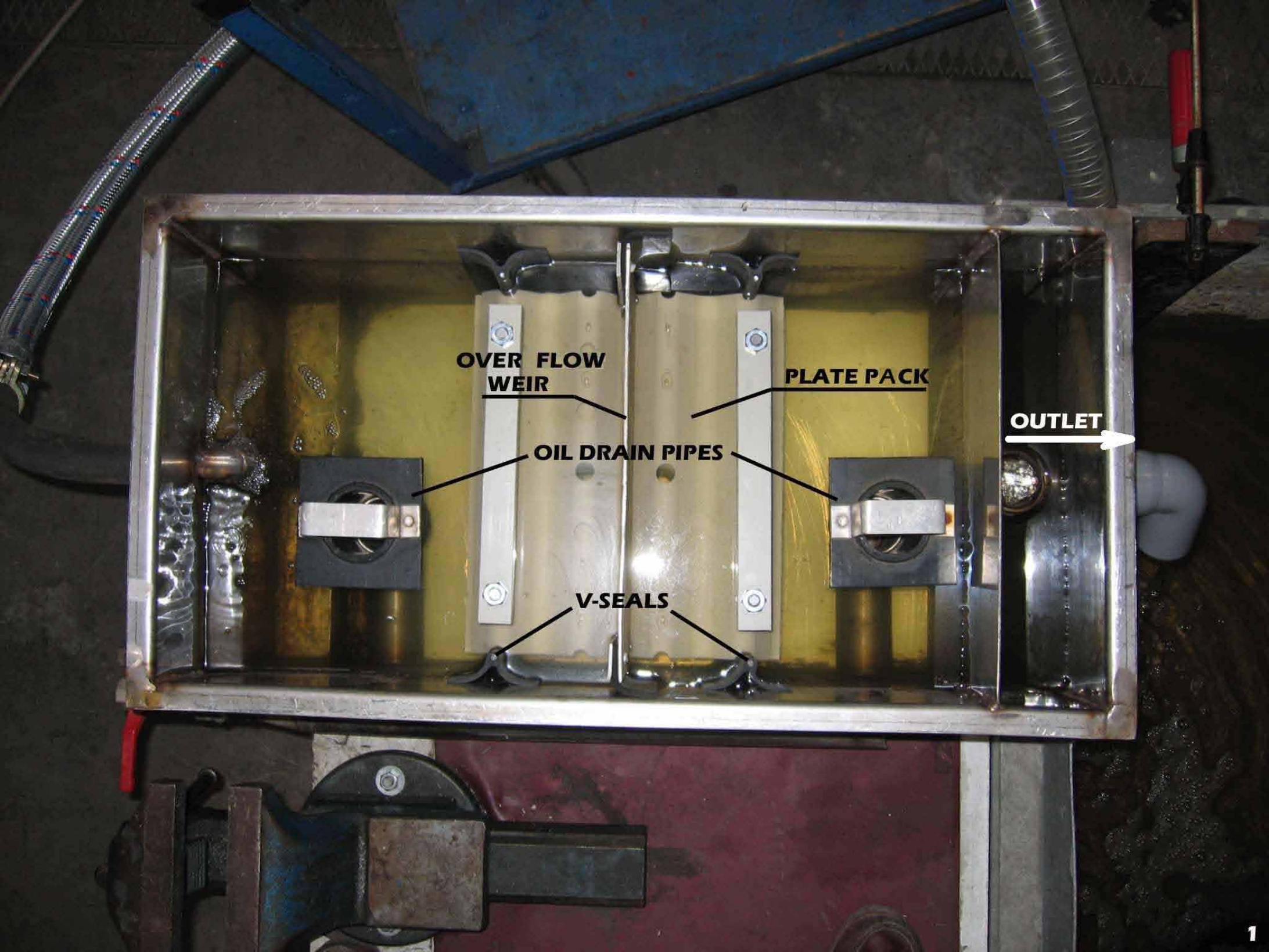


Die Oberkante des Abscheiders ist gekantet, Kantenrand 20mm.

Material: Edelstahl - Blech 2 mm

Maße in mm

	DATUM	NAME	EDELSTAHLBEHÄLTER	LEISTUNG: 250 l/h
BEARB.	17.03.95.	ZGUD		
GEPR.	23.03.95.	FREY		
MAßSTAB				
1:10				



**OVER FLOW  
WEIR**

**PLATE PACK**

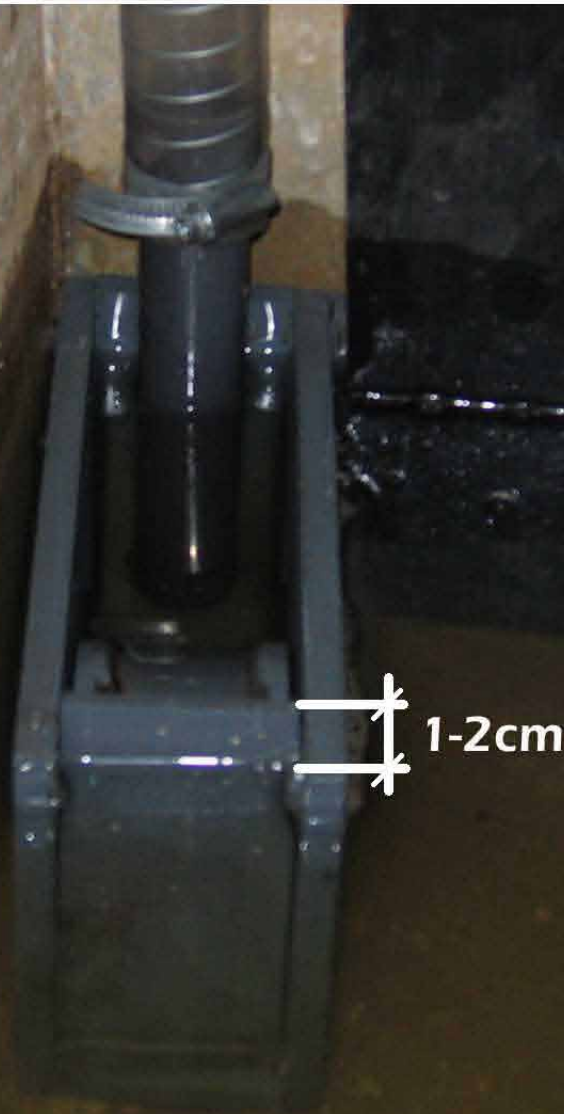
**OUTLET**

**OIL DRAIN PIPES**

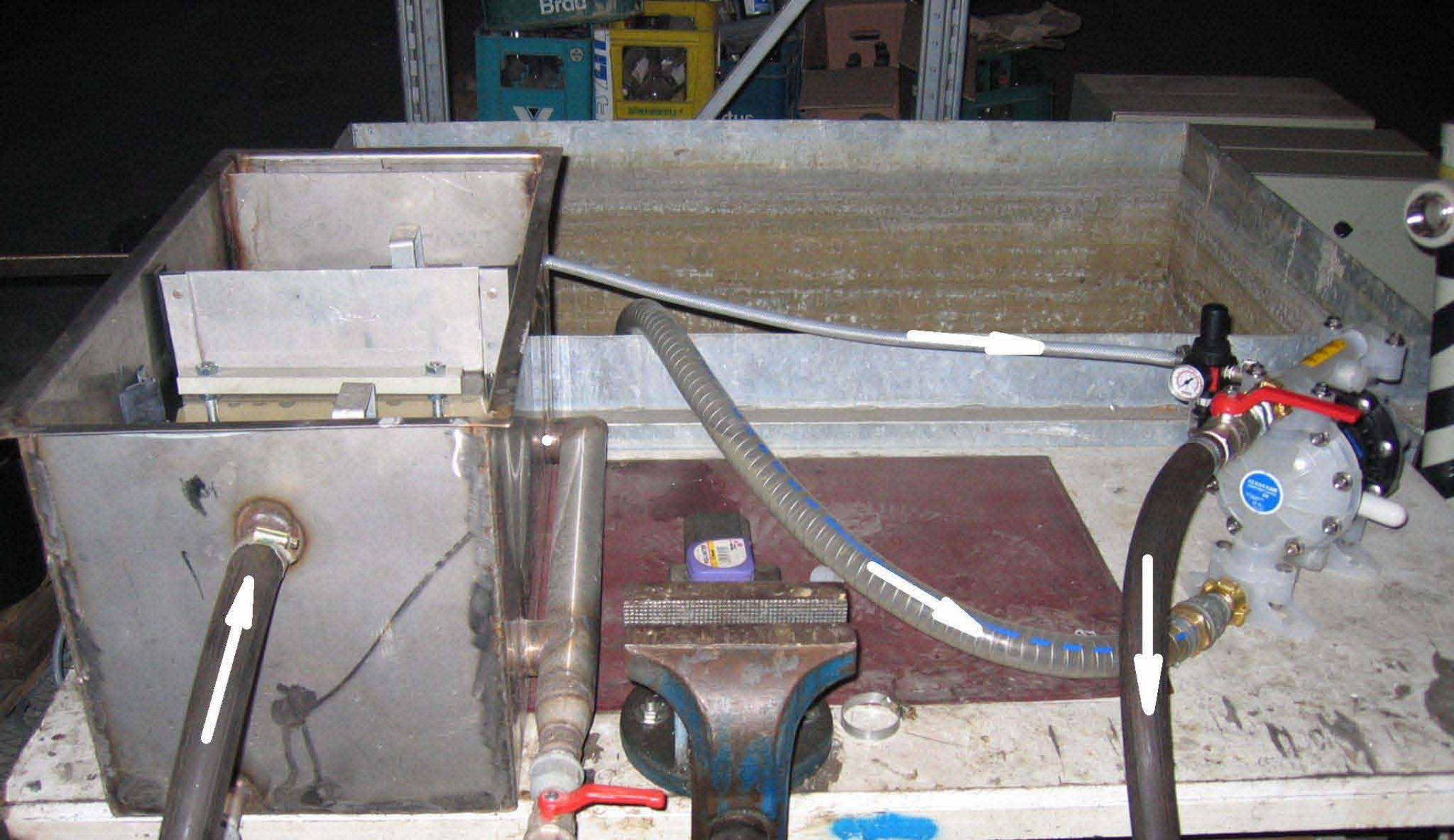
**V-SEALS**

## INSTALLATION OF THE OIL SKIMMER

1. CONNECT OIL SUCTION HOSE TO THE OIL SKIMMER
2. MOUNT THE OIL SKIMMER TO THE WALL OF THE TANK, THE SKIMMER SHOULD BE 1-2cm ABOVE THE WATER LEVEL.







## INSTALLATION OF THE PUMP

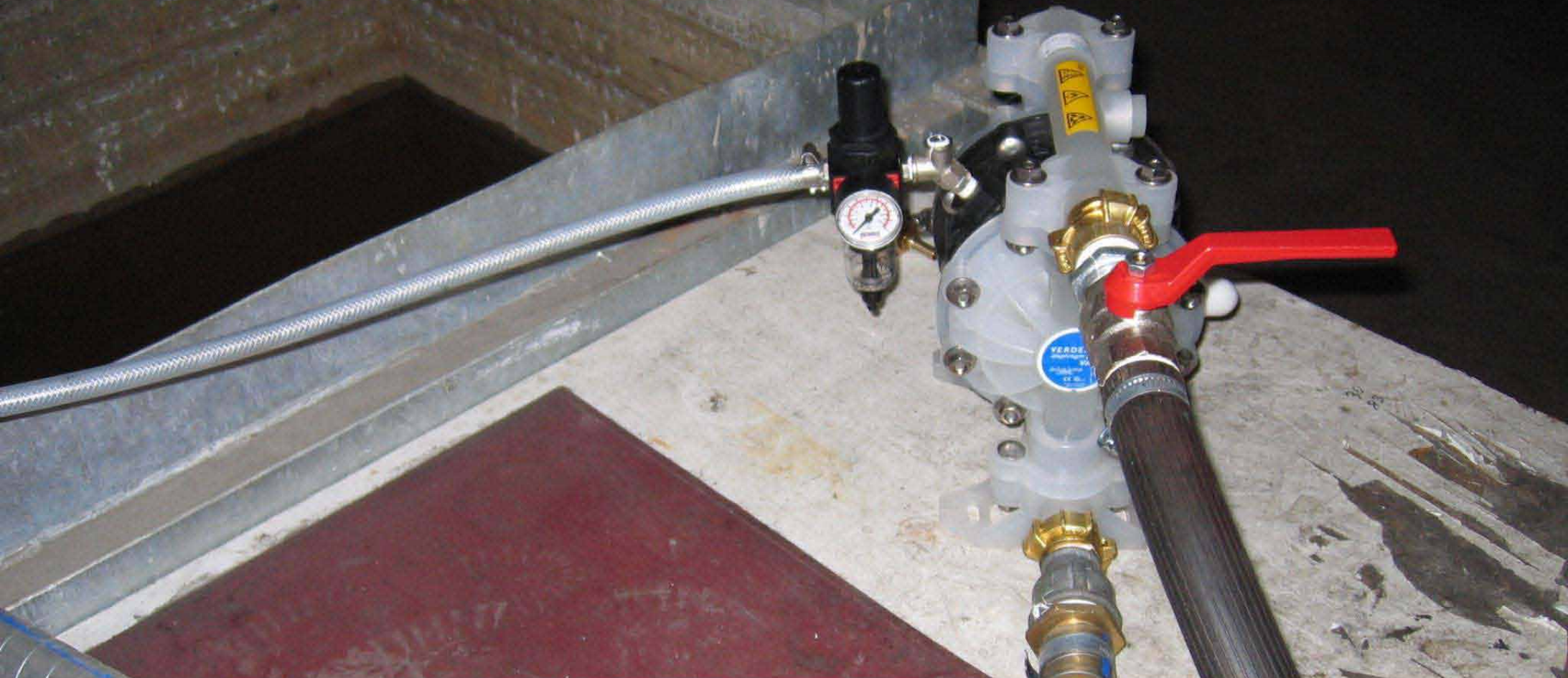
1. CONNECT THE HOSE FROM THE SKIMMER TO THE SUCTION SIDE OF THE PUMP.
2. CONNECT A HOSE FROM THE PRESSURE SIDE OF THE PUMP TO THE INLET OF THE OIL SEPERATOR.
3. CONNECT COMPRESSED AIR TO THE AIR REGULATOR.



**OVER FLOW**

THE OVER FLOW OF THE OIL SPERATOR  
CAN BE CONNECTED TO THE SEWER,  
OR BY CONNECTING A HOSE, BACK TO  
THE SUMP TANK

**TO ADJUST THE FLOW RATE OF THE OIL SEPERATOR A BUCKET WITH 5 LITERS VOLUME IS NEEDED.**



1. OPEN THE BALL VALVE IN THE PRESSURE PIPE COMPLETELY.
2. PULL THE WHEEL ON THE AIR REGULATOR UP AND TURN IT RIGHT TO INCREASE THE PRESSURE AND TURN IT LEFT TO DECREASE THE PRESSURE. THE PRESSURE AT THE PUMP SHOULD BE 4-5 bar.
3. ADJUST THE FLOW RATE OF THE OIL SEPERATOR WITH THE BALL VALVE IN THE PRESSURE PIPE. THE FLOW RATE OF THE OIL SEPERATOR IS 300 LITERS/HOUR. TAKE THE 5 LITERS BUCKET AND HOLD IT BELOW THE OUTLET OF THE OIL SEPERATOR. THE BUCKET SHOULD BE FILLED WITHIN ONE MINUTE. IF THE FLOW RATE IS TOO HIGH, CLOSE THE BALL VALVE, IF IT IS TOO SMALL OPEN THE BALL VALVE.
4. NOW THE SEPERATOR IS READY FOR OPERATION.

## ADJUSTMENT OF THE DRAIN PIPE

DURING NORMAL OPERATION, THE OIL DRAIN PIPE SHOULD BE  
2-3cm ABOVE THE WATER LEVEL.





TO DRAIN THE OIL PUSH BOTH OIL DRAIN PIPES LOCATED BEFORE AND AFTER THE OVER FLOW WEIR DOWN UNTIL THEY REACH BELOW THE OIL LAYER. THE OIL WILL NOW DRAIN INTO THE OIL DRAIN PIPE BY GRAVITY AND CAN BE RELEASED BY OPENING THE BALL VALVE AT THE END OF THE DRAIN PIPE INTO A WASTE OIL COLLECTION TANK.

OIL DRAIN PIPE

