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diaf
PILVAD

The FLUSHING SYSTEM

Description of the system

DIAF's flushing system for DIAMIX consists of one or two spears, an electro-pneumatic control as well as a high or low pressure pump unit which can be delivered together with the machine, or it can be purchased as a separate unit from a local manufacturer. The reason for having two spears is due to the "shadow effect" from the shafts in the DIAMIX container. With only one spear there will be areas on the inside surface which is not cleaned by the system.

On the top the flushing spears are equipped with a pneumatic motor rotating the flushing head in order to obtain an optimal cleaning. The flushing spear is fastened to a pneumatic cylinder which lowers the flushing head approx. 1000 mm into the tank during the flushing process.

Each flushing spear is equipped with two exchangeable nozzles which, in standard execution with two flushing spears each tank, has a cleaning agent capacity of 80 l/min. (to be recycled) at 70 bar (high pressure system).

The flushing spears are kept up by air pressure. If the pressure drops a safety cylinder will prevent the spear from "falling" down into the container. The lowering and start of the pneumatic motor is controlled by a solenoid valve. If the high pressure pump is delivered by DIAF, the solenoid valve is mounted on the pump together with the water separator and the regulator for air pressure.

To operate the system a start/stop switch is required. Either as a separate component or built into the control panel of the machine. Furthermore, a warning lamp for indication that the flushing system is in operation, is required.

If the flushing system is delivered as a separate unit, the system must also be equipped with an emergency stop besides the start/stop switch.

When both the flushing system and the machine are delivered by DIAF, the aforesaid functions will be delivered integrated in the control panel of the machine.



Flushing Pump

Owing to the operating pressure of up to 70 bar, a special high pressure pump unit is required.

This pump unit is equipped with an electric motor and a bypass valve to prevent the high pressure pump from being overloaded.

To protect the operator, a safety switch is mounted on the manhole of the machine. The switch prevents the flushing system from running when the manhole is open. If the manhole is opened during flushing the cleaning cycle will automatically stop.

Functional description

When activating the start switch the flushing spear(s) is lowered approx. 1000 mm into the tank. The pump starts at the same time for operation during the pre-set time. At the same time a lamp placed in the control panel will indicate that the flushing process is in operation. When the flushing process is finished the pump stops and the flushing spear(s) is raised to top position in the tank top.

In case of power failure or activation of the emergency stop, the flushing spear(s) will automatically be raised to top position.