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UNITS FOR FULLY AUTOMATIC PREPARATION,
STORAGE AND DOSAGE OF SOLUTIONS
PREPARED FROM POWDERY AND LIQUID
SUBSTANCES WITH CONTINUOUS REMOTE
CONTROL OF SOLUTION DOSAGE

VX – CHHXXX – DA

UNIT FOR CHEMICALS
PREPARATION

VANEX



UNIT FOR CHEMICALS PREPARATION VX – CHHXXX – DA

Unit for chemicals preparation VX - CHHXXX - DA is designed for fully automatic or manual preparation, storage and dosage of solutions prepared from powdery substances and from emulsions with the possibility of continuous remote control for solution dosage.

The basic utilization of this unit is to prepare flocculation medium solutions - substances that are intended mainly for the flocculation of various sludge types before their processing (draining) in the belt presses or in other machines in water cleaning units (sewage disposal plants).

Following media are necessary for the operation of a unit for chemicals preparation:

- clean pressure water (flow 2 - 3 m³/h, pressure circa 0,3 Mpa),
- power supply 3/N/PE/AC 400/230 V 50 Hz TN - S, required input 3,52kW,
- suitable powdery flocculation medium.

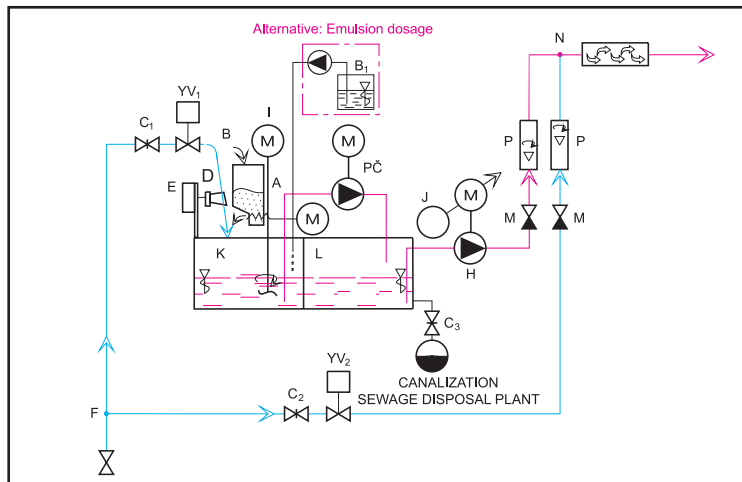
UNIT FOR CHEMICALS PREPARATION VX-CHHXXX-DA PARAMETERS

Expected Concentration Range (%)	0,1 - 1,0
Informative Mixing Performance (m ³ · h ⁻¹)	0,7 - 0,5

The unit performance can increase to 2,5 m³/h if the solution of a higher concentration is mixed and the thinning branch is used.

Above mentioned atypical application is recommended to be consulted with the producer.

Unit Dimensions (m)			Weight (kg)
Length	Width	Height	
2,0	1,2	1,8	485



Unit for chemicals preparation consists of two polypropylene tanks that are in classical pumping units placed next to each other.

The dissolving tank (K) serves for flocculant dissolving and for its ripening.

The storage tank (L) serves as solution source. The duty of operating personnel consists only in putting the unit into operation through the START - button and in refilling of the hopper for the flocculation medium worm feeder (A) with powdery flocculation medium (B) or in exchanging the emulsion cartridge (B1).

The operating personnel is informed by the horn (D) about the necessity of refilling the feeder.

The horn informs at the same time about the short-

ness of the solution and about eventual unit failure.

OPERATING PROCEDURE - DESCRIPTION

This unit works in fully automatic or manually controlled cycle of solution preparation; the control is done from separate distributor (E) that is the part of the machine.

After putting the unit in operation the dissolving tank (K) is feeded through solenoid valve YV1 with clean water (F).

The feeding speed of the dissolving tank can be controlled through the slide valve (C1).

After immersion of the mixer propeller (I) the feeder for powdery flocculation medium starts automatically feeding the powdery flocculation medium (or emulsion) into the water stream and this wet flocculation medium falls into the dissolving tank.

The strength of solution is adjusted by the distributor through setting the dosing time for powdery flocculation medium or emulsion.

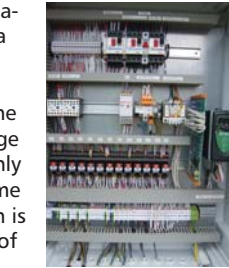
The solution is homogenized in the dissolving tank by the propeller mixer.

The homogenization time period can be set according to recommendation of flocculation media producers.

The solution is automatically pumped with the pump (PC) into the storage tank. This can be done only in case of sufficient volume of the storage tank which is controlled through a set of immersion electrodes.

The solution is pumped from the storage tank through the displacement screw pump (H) that is equipped with remote continuous change of the dosing amount during the operation via frequency converter (J) and potentiometer with a scale.

The unit for chemicals preparation VX - CHHXXX - DA enables also further solution thinning via separate thinning branch.



The thinning rate can be read on the implemented rotameters (P) and can be regulated through the slide valve (C2) and through engine revolutions of the dosing pump.

The flocculation medium solution and the thinning water are mixed in the mixer (N). The solenoid valve YV2 ensures closing of the thinning branch in case that the dosing pump for the solution does not work.

The non-return flap valves (M) prevent undesirable solution thinning, eventually pollution of the water source.

The gate valve C3 serves for solution discharging after the loss of its force.

SPECIAL VERSIONS

Units for chemicals preparation can be produced also as special versions, eventually they can be fully adapted for special customer's requirements. Special versions (eventually their combinations) are:

- VX - CHHXXX - DAP, letter „P“ means memory that after power supply failure automatically ensures the cycle continuance from the mo-

ment of the failure,

- VX - CHHXXX - DAT, unit for preparation of liquid concentrated flocculation media ...solutions (eventually of other special solutions),
- units with two, eventually with more separately controlled dosing pumps for the solution,
- VX - CHHSXX - DA, vertical unit – the upper dissolving tank is placed above storage tank,
- VX - CHH3LXX - DA, three-chamber unit for chemicals preparation - unit consists from a polypropylene tank of the net volume 1,7 m³ that is divided into 3 sections each 570 l,
- units with tanks enlarged capacity.

UNITS ADVANTAGES

- own distributor, which considerably reduces the costs related to electrical installation of the unit,



- the continuous remote control of the pump performance during the operation and automatic preparation of flocculation medium solution enables optimal setting of the flocculation medium charge (flocculation medium savings) and simplifies the operation of the whole line,
- the dosing pump performance can be regulated also with electric current 4 – 20 mA (the possibility for pump performance control from the governing control system),
- the possibility for displaying of the pumped solution amount on the display of the control panel or on the PC-screen.

REFERENCES:

Nowadays Vanex products are delivered and put into operation in more than 340 localities.

For more information about our company, our products and references see our web page www.vanex.sk.

Representation:

