



## AUTOMATED PUMP- HYDROCYCLONE UNIT

Saint-Petersburg, 2020





## PURPOSE AND FUNCTIONS

Automated Pump-Hydrocyclone Unit (APHU) is designed for output product particle size classification of the grinding reprocessing in order to ensure the best conditions in terms of the degree of grinding and the density of flotation feed.

APHUs differ in the number and size of cyclones, pumps, sump and battery arrangement, as well as equipping with shutoff and control valves.

### FUNCTIONS

- + regulation of pulp pressure in the hydrocyclones supply by changing the number of operating devices;
- + regulation of the slurry level in the sump by changing the pump performance;
- + regulation of the hydraulic cyclones drain density by water supply to the sump;
- + automatic start and stop of the hydrocyclone unit automated control system (HUACS).



## ADVANTAGES

- + use of programmable controllers with operator display panel,
- + simple procedure for setting up of regulation and process control systems,
- + use of reliable pneumatic actuators for shutoff valves,
- + possibility of manual control of actuators,
- + use of variable frequency drives for sand pumps,
- + ability to operate both in the local control mode and as part of the automated technological process control system (ATPCS) of the concentration plant,
- + different design.

## SPECIFICATIONS

The following are the parameters of the **ANGU-660RIF** unit (3+1) - the unit with one battery of 4 hydrocyclones, 3 main ones, one standby, 660 mm in diameter; two pumps, one common sump.



+ Number of hydrocyclones (operating+reserve), pcs	3+1
+ Diameter of hydrocyclones, mm	660
+ Number of pumps(operating+reserve), pcs	1+1
+ Measuring range of pulp level in sump, cm	25 ÷ 500
+ Level maintenance accuracy, %	±5
+ Water flow measurement range, m <sup>3</sup> /h	0 - 300
+ Flow maintenance accuracy, %	±1
+ Pressure measurement range in the hydrocyclone supply, MPa	0,05–0,25
+ Control cabinet supply voltage, V	~220
+ Dry air supply pressure, kp/cm <sup>2</sup>	6÷10
+ Supply air consumption, L/min, max	800
+ Upper level interface capability	Yes



## PARAMETERS

### POWER SUPPLY PARAMETERS :

- + supply network type: single-phase network  $\sim 230_{-15\%}^{+10\%}$  V
- + signal frequency:  $50 \pm 1$  Hz;
- + power consumption: max 300 W.

### PNEUMATIC SUPPLY MAINS PARAMETERS :

- + air consumption: max 150 L/min;
- + purity class for solid particles: not lower than 4 in as per GOST R ISO 8573-1;
- + purity class for water content in the liquid phase: not lower than 7 as per GOST R ISO 8573-1;
- + purity class for oil content 4 as per GOST R ISO 8573-1;  
inlet pressure: max 0.8 MPa.



THANK YOU FOR YOUR ATTENTION!

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