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### Latest news

**Porto Carras Greece - Greek Fall**  
U.C.M. Resita S.A. attended successfully at the most important international conference and ...

**Pascota is climbing in force the steep incline of the European Motorcycle Championship**

The pilot Ionel PASCOTA was present at the middle of October in ...

**Just one point short for celebrating total fiesta**

The last stages of Hill Climbing National Championship took place on Friday, ...

**Other 2 hydro generators left for Ambutirtha**

Our company successfully completed the manufacturing process for the two vertical hydro ...

**7 years - "MESAGERUL" U.C.M. Resita**

On 30<sup>th</sup> of August 2006, there were seven years since the first ...

## Hydro power equipment

### Field of activity


U.C.M. Resita manufactures hydro power equipment - complete hydro power units - machines for power generation and hydro-mechanic equipment for power stations, dams, waterways, gates, pumping stations, irrigation systems.

Hydro power equipment:

- Hydraulic turbines of low, medium and high output,
- Governors,
- Electric generators and excitation systems,
- Hydropower unit of low output and micro-hydro power units.

Hydro-mechanic equipment:

- Valves of butterfly, spherical, discharge and other types, including their driving systems;
- Hydro servo motors with large diameters and strokes.

Download the [reference list](#) for the custom designed hydro power units, which includes the turbine, the electric generator, the governor, the input valve, in pdf form. 

### Basis for manufacture



U.C.M. Resita, based on a rich experience with production of machines and some isolated hydro power units, was involved since as early as 1960 in the continuous production of hydro power equipment: hydraulic turbines, electric generators and all systems and components of hydro power units.

The first types of hydraulic turbines produced are the medium and low head Kaplan. Design and production have continued with other turbine types: Francis, Pelton, bulb, reversible bulb (pump-turbines) of medium and high output and turbines of low output: propeller, Kaplan and semi Kaplan turbines with "S" water circuit, horizontal Francis, horizontal Pelton. Thus, the turbine range in U.C.M. Resita production became almost complete.

According to the output and speed characteristics and depending on turbine location, had been designed the electric generators, control systems, input valves, excitation systems and auxiliaries.

These achievements have been possible on basis of the own research activity in the field, carried out both for developing new turbines with high efficiency

Search



and for research of components of turbines, generators, governors, valves and their auxiliaries.  
Significant data:

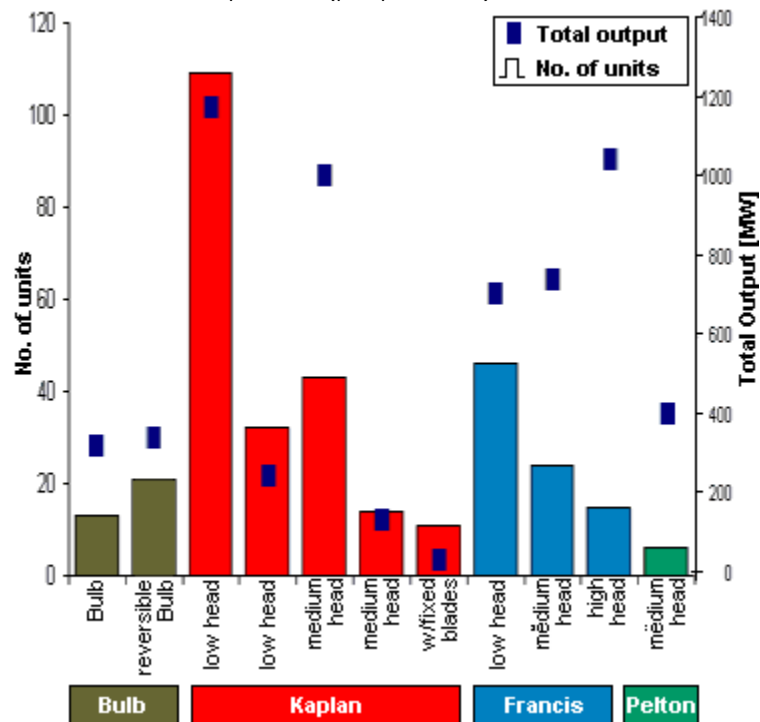
- 1960 - started at U.C.M. Resita the continuous manufacture of hydropower units (hydraulic turbines and electric generators);
- 1970-1971 - there were manufactured three Kaplan turbines having the diameter of the runner 9.5 m and three electric generators of 190 MVA for HPP Iron Gates I, on Danube;
- 1972 - it was put into operation the test stand for research and measurements on hydraulic turbine models;
- 1986 - it was put into operation the first hydropower unit with high head of 526 m, for HPP Retezat.

U.C.M. Resita has manufactured over 300 turbines and electric generators of different types, summing a total capacity of over 6,300 MW, respectively over 300 round section valves and over 200 hydraulic servomotors of different types and diameters.

## Hydraulic turbines

Types of manufactured hydraulic turbines:

- Pelton
- Francis
- Kaplan
- Kaplan bulb
- Reversible Kaplan bulb (pump-turbines)



Download the [reference list](#) for turbines, in pdf form. 

## Governors

Digital or electro-hydraulic analogue governors, and mechano-hydraulic governors for all types and sizes of hydraulic turbines.

### Oil pressure units

Oil pressure units of various pressures and capacities, for all types and sizes of hydraulic turbines.

## Electric generators and

## excitation systems

### Type of manufactured electric generators

Vertical synchronous electric generators of low/high speed:

- power range 1...190 MVA;
- voltage range 3.3...15.75 kV;
- range of low speed 71.5...250 rpm;
- range of high speed 250...1,500 rpm.

Horizontal synchronous electric generators of low/high speed:


- power range 0.5...35 MVA;
- voltage range 0.4...11 kV;
- range of low speed 50...125 rpm;
- range of high speed 375...1,000 rpm.

Horizontal synchronous electric generators of low speed, water-cooled:

- power range 10...35 MVA;
- voltage range 6...11 kV;
- range of low speed 50...125 rpm.

### Type of manufactured excitation systems

- Excitation system with rotary diodes
- Static excitation system

Download the [reference list](#) for representative electric generators, in pdf form. 

## Hydropower units of low output


For hydro power stations of low discharge, U.C.M. Resita has developed a production program of standard machines, comprising hydropower units of low output and micro hydropower units.

Low output power units, of 100 and 1,200 kW (2,500 kW):

- with horizontal Francis turbines, for heads of 15 to 130 m
- with propeller type turbines, semi-Kaplan, Kaplan, horizontal, with "S" shaped hydraulic circuit, for heads between 3 and 15 m
- with Pelton turbines, for heads between 100 and 700 m
- for turbines with speed governors or with positioner control systems
- with synchronous or induction generators

Micro hydropower units with power up to 100 kW:

- for heads between 4.5 and 14.5 m and flow rates of 0.11 and 0.33 m<sup>3</sup>/s
- for heads between 16 and 35 m and flow rates of 0.145 and 0.37 m<sup>3</sup>/s

Download the reference lists: 

- **Custom designed hydropower units with unitary power below 5 MW;;**
- **Low output custom designed hydropower units of FO and EOS type;;**
- **Micro-hydropower units of wide use - MLU.**

Other types of low output hydropower units, prototype stage:


- with Pelton turbine, having unitary output from 8.5 up to 37 kW, for heads between 45...60 m and discharge between 0.024 and 0.08 m<sup>3</sup>/s.
- with axial bulb turbine, having unitary output from 1.6 up to 8 kW, for heads between 3.5...8 m and discharge between 0.08 and 0.17 m<sup>3</sup>/s.
- with Banky turbine, having unitary output

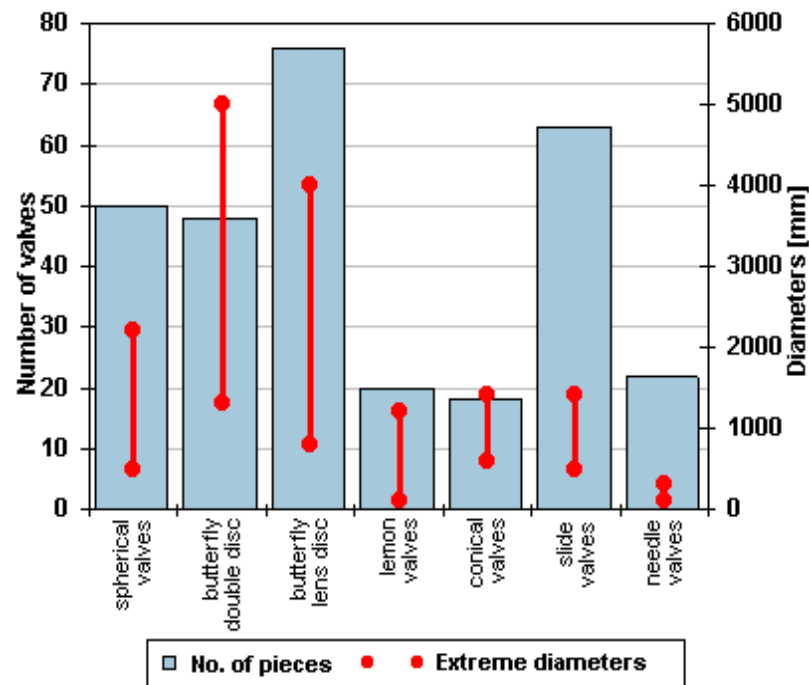
from 1.9 up to 50 kW, for heads between 4...40 m and discharge between 0.075 and 0.24 m<sup>3</sup>/s.

## Valves including the driving system:

Type of custom designed valves produced, within the following range of parameters:

- Butterfly valves with lenticular disk, diameters between 1000 and 5000 mm, pressures 10-200 m.w.c.
- Butterfly valves with biplane disk, diameters between 1000 and 5000 mm, pressures 50-300 m.w.c.
- Spherical valves, with diameters between 500 and 2500 mm, pressures 200-1000 m.w.c.
- Cone discharge valves, with diameters between 500 and 2000 mm, pressures 22-150 m.w.c.
- Hollow jet valves, with diameters between 250 and 1700 mm, pressures 30-150 m.w.c.
- Slide valves, with diameters between 500 and 1600 mm, pressures 25-160 m.w.c.
- Lemon valves, with diameters between 100 and 1500 mm, pressures 25-160 m.w.c.

Download the [reference list](#) with the main manufactured valves in pdf form. 






## Hydraulic servomotors

Main characteristics:

- diameters between 110 and 600 mm
- piston stroke between 2.5 and 20 m
- work pressure up to 200 bar

U.C.M. Resita has manufactured until now over 200 servomotors having the following diameters: 110, 160, 200, 210, 250, 300, 350, 400, 500 and 600 mm.

Download the [reference list](#) with the main manufactured servomotors, in pdf form. 

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