



## Butyl Products Ltd.

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# Water Treatment Unit

**LMS 4m<sup>3</sup>/h**

**Skid mounted**

**Technical Specification**



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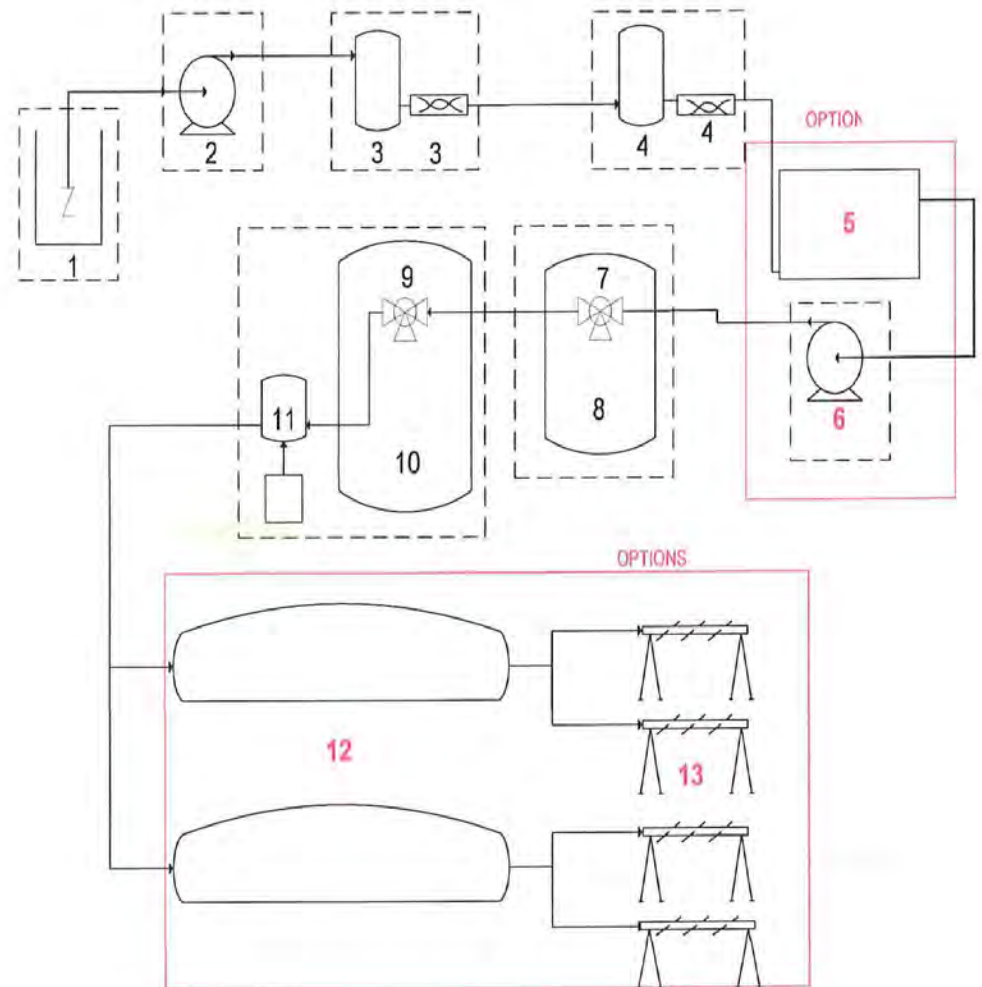
# Technical Specifications

## LMS 4m<sup>3</sup> / h on 2 Skids

### I. General Characteristics

Kind of water treated	: All kinds of sweet water, non contaminated by 'toxic' products.
Unit Flow	: 4 cubic meters per hour nominal flow rate.
Principle	: Chemical pre-treatment by manual coagulation & flocculation, filtration through a 2 layer Sand filter and absorption on activated carbon filter.
Disinfection	: Automatic injection of NaDCC (55% active chlorine).
Storage & distribution	: See <i>Options</i> .
Installation	: Quick installation in 30 minutes for 2 people, manual handling.

### II. Setup Overview



### **III. Description**

Water treatment unit mounted on 2 separated skids, 4 cubic meters including:

- A black perforated socket immersed to allow a 1.00mm pre-filtration (1)
- Water suction through a strainer equipped with a non-return valve, coupled with a float
- Self priming diesel motor pump designed for raw water pumping (2)
  - \* Hatz diesel engine B20, 4 7HP
  - \* Pump 4cum/h at 25m HMT, 3600rpm
  - \* 8.3Kg
- Coagulation chamber with static mixer (3 )
  - \* Coagulant in slow dissolving pastille
- Flocculation chamber with static mixer (4)
  - \* Flocculant in slow dissolving pastille
- 100m (4 x 25m) hose lengths to assist with reagent mixing and flocs formation

**In case of turbidity > 100 NTU we recommend the addition of a settlement tank—see options 5 & 6**

#### **Sand filter:**

- PEHD filter 450mm diameter, resistant to abrasion (8)
- Food grade quality
- Two layers of sand
- Filtration speed 25m<sup>3</sup> / (h.m<sup>2</sup>)
- 6 way multiport valve (7)
- Manual backwash and rinse
- 1" output drain with strainer to allow filter draining
- 2" output drain to allow mass filtration draining
- Maximum pressure 2.5 bars, pressure test 4 bars
- Coloured 2" Guillemin fittings for intuitive connection

#### **Activated Carbon Filter:**

- PEHD Filter 450mm diameter, resistant to abrasion (10)
- Food grade quality
- Filtration speed 25 m<sup>3</sup> / (h.m<sup>2</sup>)
- 6 way multiport valve (9)
- Manual backwash and rinse
- 1" output drain with strainer to allow filter draining
- 2" output drain to allow mass filtration draining
- Manometer equipped for pressure control
- Maximum pressure 2.5 bars
- Pressure test 4 bars
- Coloured 2" Guillemin fittings for intuitive connection

### Complete automatic dosing system for water disinfection (11)

- Chlorination by NaDCC granules, 55% active chlorine
- 25 litres PE tank, resistant to UV for preparation and storage of the basic solution
- Reagent level indicator
- Draining valve
- Dosing pump (Max. Flow : 4.5 m<sup>3</sup> / h—no energy required)

The dosing pump (Dosatron system) is more precise for chlorine injection

#### Additional equipment:

- All necessary hoses for connection between the unit components
- Detailed instruction and operation handbook in English (other languages on demand)
- Complete maintenance kit for motor pump and dosing pump
- Complete tool kit for operation and maintenance of the unit
- pH and Chlorine analysis kit
- Turbidity tube
- Consumables for an operating period of 3 to 6 months (this depends on the raw water quality and the length of time the unit will run on a daily basis), including coagulant, flocculant and NaDCC

### **Packing**

The Unit is packed in 2 wooden crates measuring: 1.20m x 0.80m x 1.50m

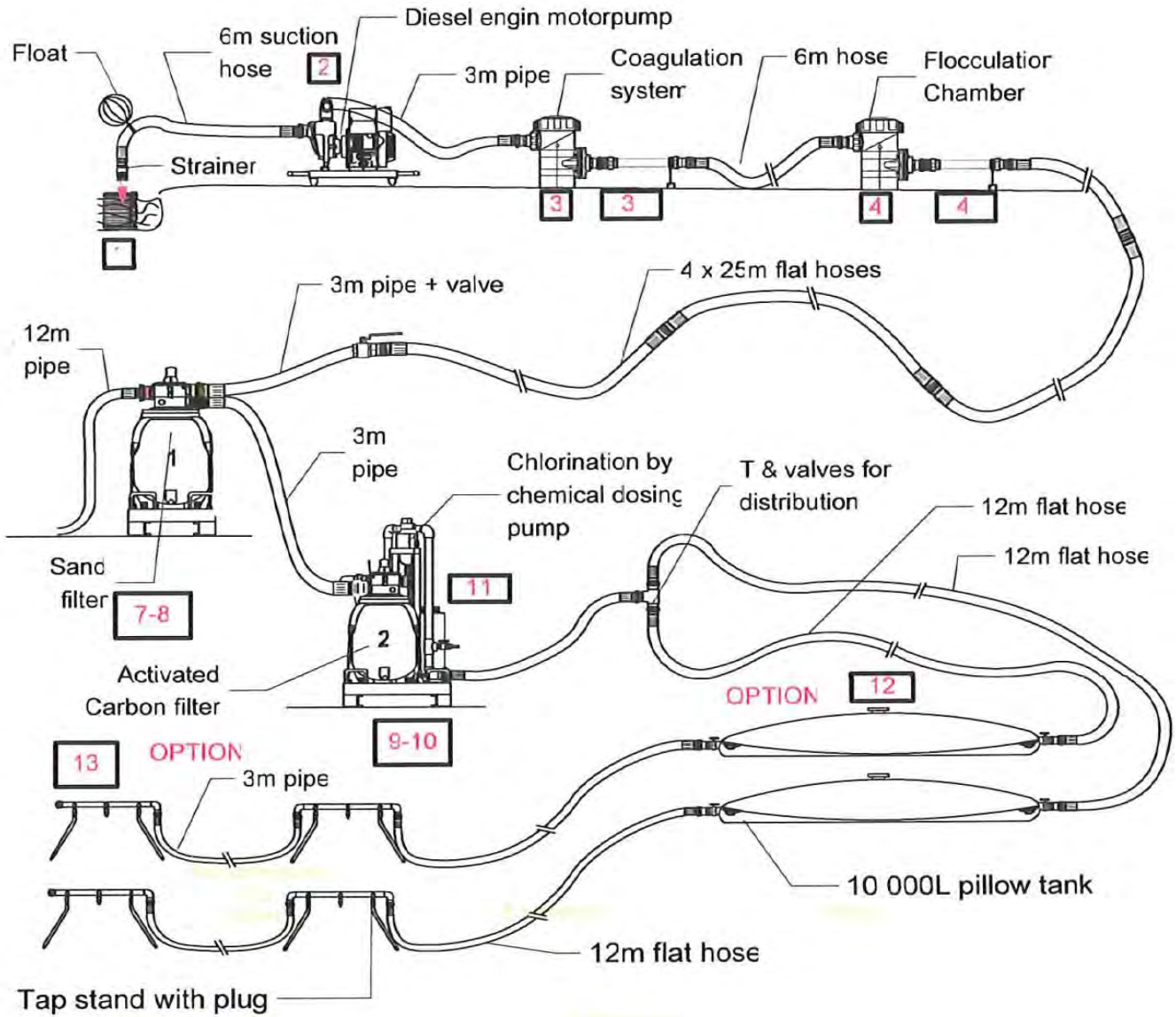
Gross weight: 550Kg

*Please Note:* The NaDCC (UN Code: 3077, Class 9) is packed in one specific case, according to hazardous goods regulations and can be shipped by all methods of transport.

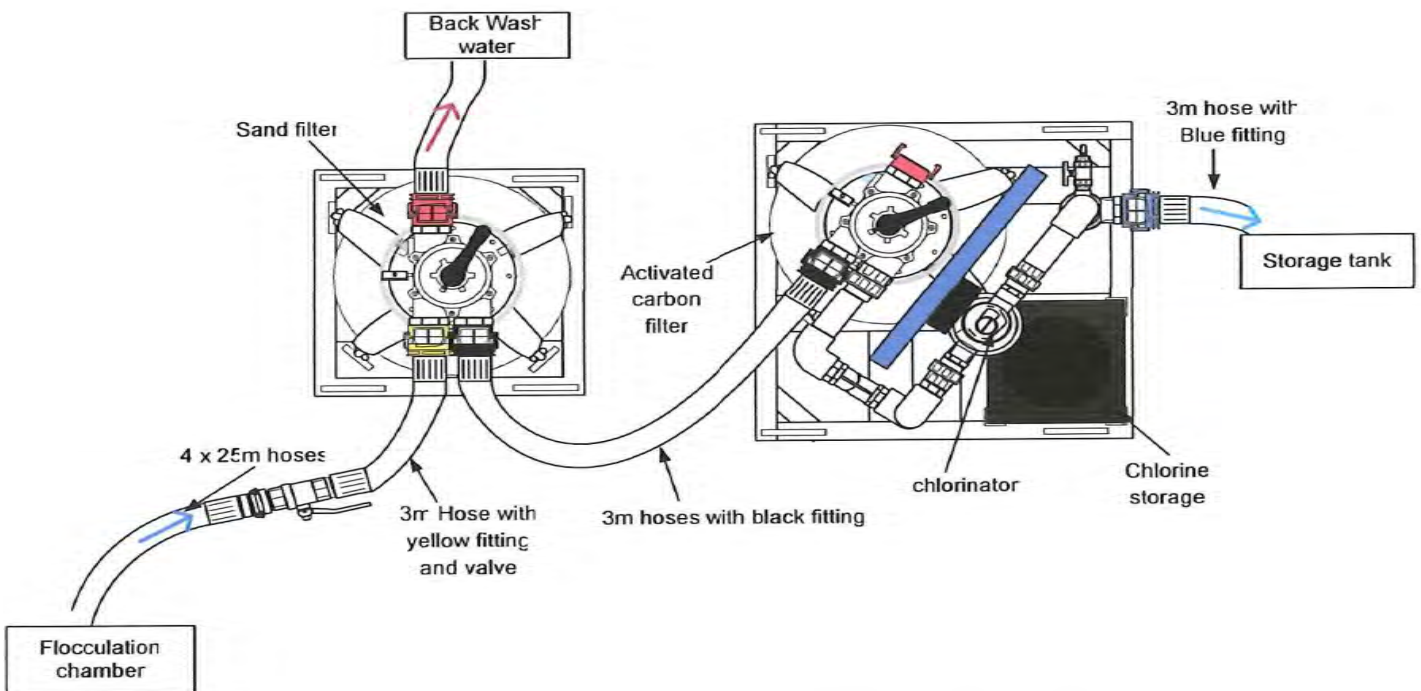
Dimensions: 0.41 x 0.41 x 0.41m

Gross weight: 26Kg

#### IV. Diagram of Installation (Without settlement tank)



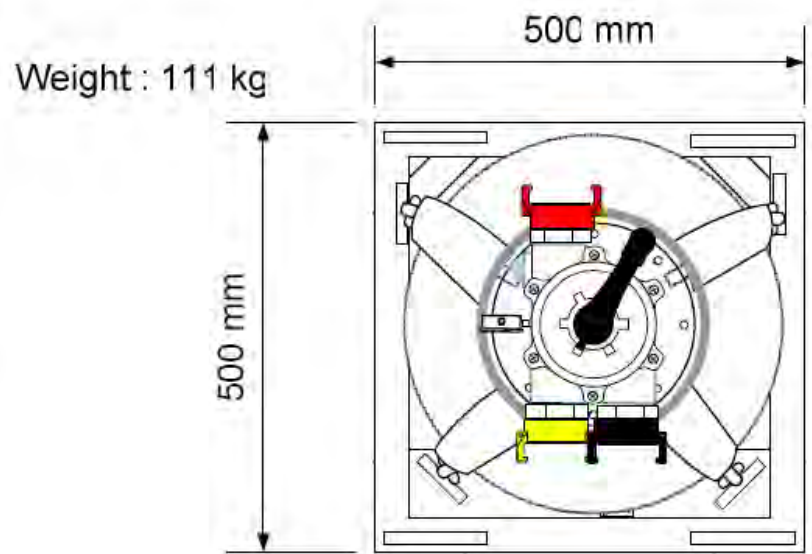
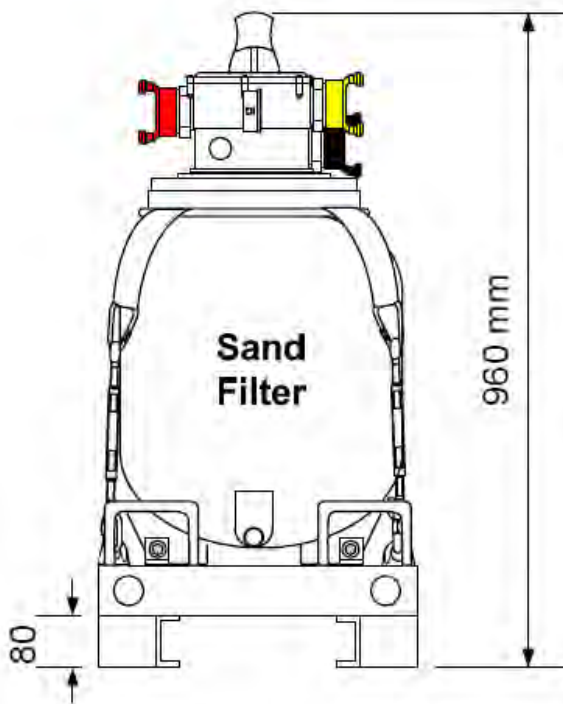
#### V. Connections



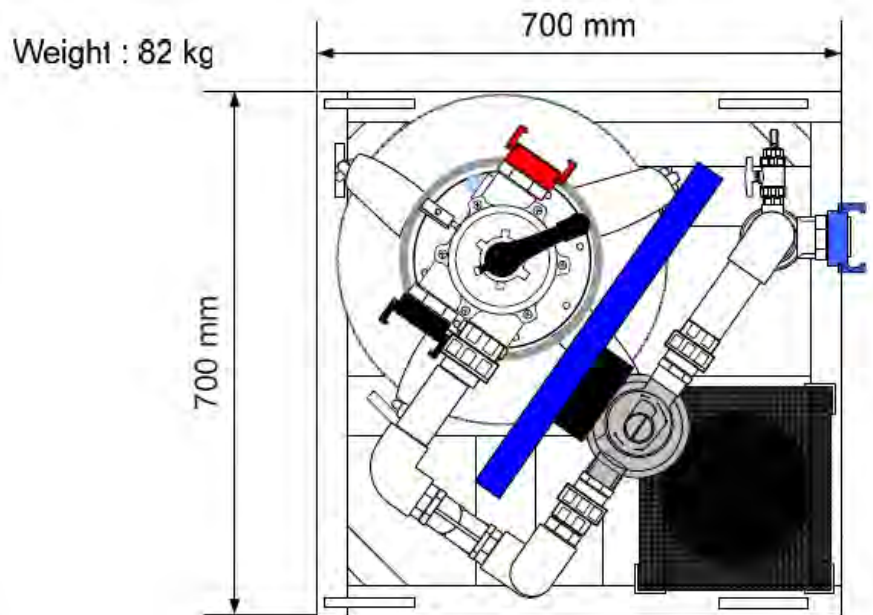
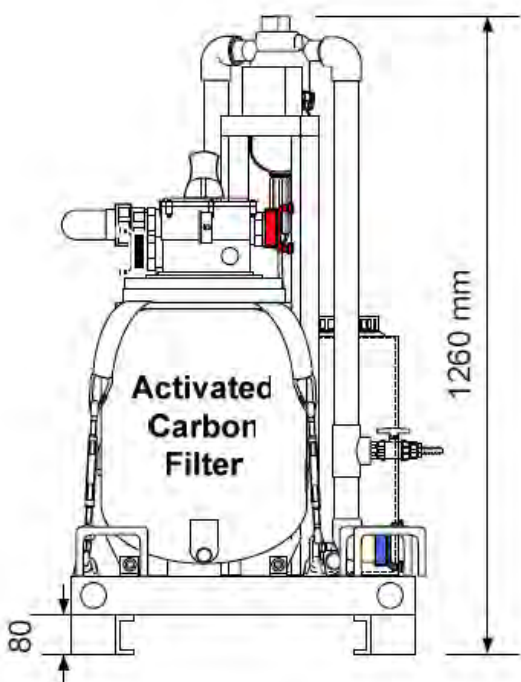


## Filter Characteristics

### The Sand Filter Skid:

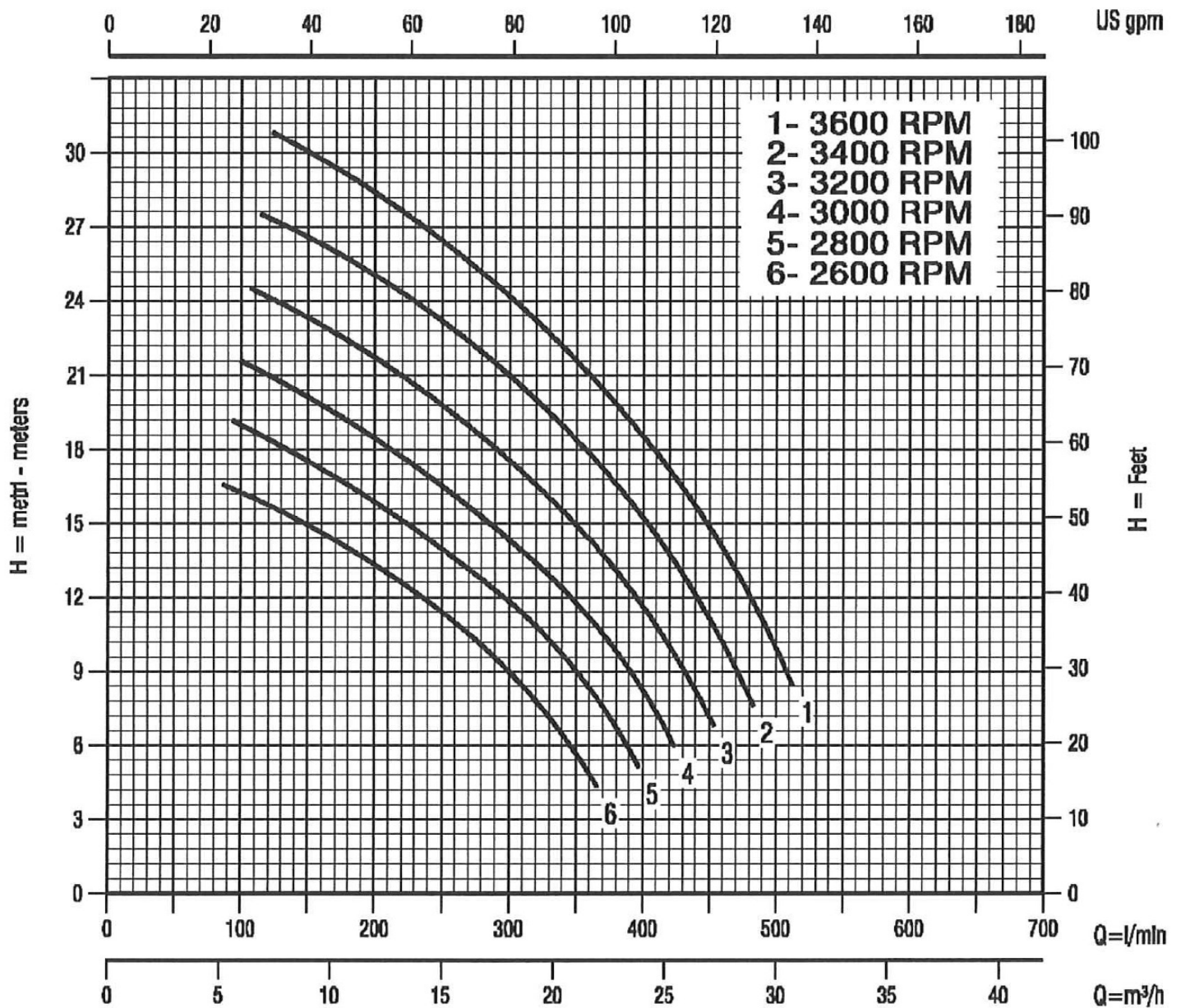


### The Activated Carbon filter skid & NaDCC Chlorination:

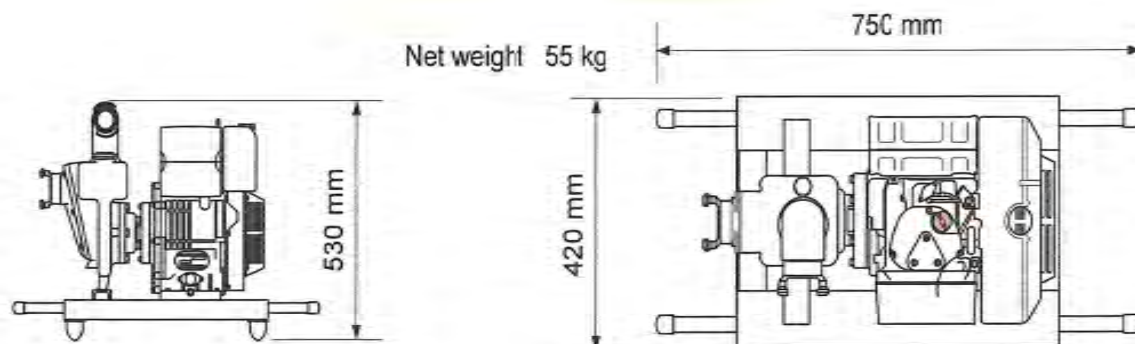


## VI. Motor Pump characteristics

### Motor Pump duty graph



### Motor Pump Skid



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