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Packaged Systems







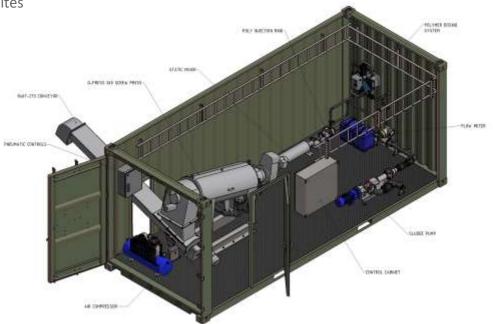
## Introduction

The Hydroflux QPRESS containerized sludge plant is a packaged system that is delivered as a pre-piped, pre-wired and tested unit. The system is designed to dewater sludge that is produced from water and wastewater treatment plants.

### **Applications**

QPRESS Containers can be used in wide range of municipal, industrial and mining applications as follows:

- Mine sites and accommodation camps
- **▼** Resorts
- Developments
- Industrial sites
- **▼** Towns
- **▼** Remote sites





### **Materials of Construction**

| SECTION   | SPECIFICATION           |
|-----------|-------------------------|
| Container | Painted Steel           |
| QPRESS    | 304/316 stainless steel |
| Pipework  | ABS/uPVC                |
| Conveyor  | 304/316 stainless steel |

## General Description

QPRESS is delivered as a packaged that can be installed within a single day. The system generally includes the following equipment:

- Sludge feed pump and flowmeter
- HUBER QPRESS
- Polymer Make Up and Dosing System
- Air Compressor
- Discharge Screw Conveyor
- ▼ Control System
- Piping
- **■** Wiring
- Inlet and Outlet Connections
- Structurally modified container with access doors

The sludge pump is a helical rotor type and it draws from a sludge tank or directly from the bioreactors. Flow is measured using an electromagnetic flow meter installed within the sludge pipework prior to the QPRESS.

Polymer is required to flocculate the sludge. A polymer make up and dosing system is provided to batch diluted polymer from neat liquid. There are two versions of the polymer systems, one is fully automatic and the other a manual batch version.

Dilute polymer solution is mixed into the sludge using a polymer injection ring. Further mixing is provided by use of a static flocculation tube and mixing valve.

The flocculated sludge then enters the QPRESS where free water is drained, thickened and then dewatered to a spadable cake. The cake is transport from the container using an inclined screw conveyor and typically discharges into a stock pile or skip.

Pressed water is captured within the QPRESS and gravitates to a flange mounted at the side of the container.

Control is automated using a PLC system.



| Item                             | Q280 Container | Q440 Container | Q620 Container |
|----------------------------------|----------------|----------------|----------------|
| Hydraulic Capacity (m3/h)*       | 1.5 - 4        | 3 - 9          | 5 – 22         |
| Solids Capacity Range (kg/h dry) | 15 - 110       | 30 - 220       | 60 - 440       |
| Volume Reduction (%)*            | 80 - 85        | 80 - 85        | 80 - 85        |
| Container Size                   | 20'HC          | 20'HC          | 40'HC          |
| Water Demand (L/s at 5 bar)      | 1.5            | 2.2            | 2.3            |
| Typical Hourly Demand (L/h)      | 120            | 170            | 300            |
| Power Connection (A)             | 16             | 16             | 20             |
| Inlet Connection                 | DN80           | DN80           | DN100          |
| Filtrate Connection              | DN80           | DN80           | DN150          |
| Water Connection                 | DN25           | DN25           | DN32           |

 $<sup>\</sup>hbox{\it *the capacity depends on the type of sludge and its solids content. Consult Hydroflux for sizing details}$ 

## **Performance Data**

| Application   | Sludge Type  | Cake Solids (%) | Polymer Dose (Kg/t) |
|---------------|--------------|-----------------|---------------------|
| Sewage        | WAS          | 17-18           | 9-12                |
| Sewage        | Digested WAS | 20-24           | 8-12                |
| Food Industry | DAF Float    | 20-35           | 6-10                |
| Food Industry | WAS          | 14-16           | 10-12               |
| Coal Seam Gas | Chemical     | 23-25           | 4-6                 |
| Water         | Chemical     | 16-18           | 10-12               |
|               |              |                 |                     |







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