

# PUROPACK From Purolite

The Next Generation Packed Bed Ion Exchange Technology  
for Water Treatment Plants

**PUROPACK** is a maximum performance packed bed system which provides a combination of superior engineering principles and improved resins that together optimise water treatment plant performance

## The Manual



- **Compaction flows.**
- **Pressure loss.**
- **Resin filling and transfer.**
- **Backwash graphs.**
- **Engineering drawings.**
- **Regenerant chemical quality.**
- **General information relating to demineralisation systems.**

## Pilot Plant Data

All the data generated directly from a Purolite Pilot Plant that operated over a period of two years.

This unique pilot plant performance data has enabled Purolite to present the most accurate design package available in the market today.



*The design philosophy is based on upflow service and down-flow regeneration.*

The **PUROPACK** design manual covers:

- **Choice of PUROPACK resin system and layout.**
- **Guidance on suspended solids.**
- **Capacity and Leakage.**
- **Regeneration procedures.**
- **Vessel sizing and bed depths.**

## Design Factors Addressed

The detailed information includes :

- **Design of units and systems.**
- **Detailed design of distribution systems.**
- **Hydraulic factors relating to resin compaction and pressure drop.**
- **Resin transfer procedures.**
- **Backwash facility requirements v's. suspended matter.**
- **Resin bead size gradings.**
- **Resin capacities and leakage data.**

The performance graphs are presented in a clear and concise fashion making it easy for you to find what you want.

## THE RIGHT TOOLS FOR THE JOB

## Improved Resin Performance

The **PUROPACK** resins have been especially developed to compliment the design parameters of the system. The **PUROPACK** resins benefit from improved capacity and leakage performance vs. standard resin grades.

## Choice of PUROPACK Resins

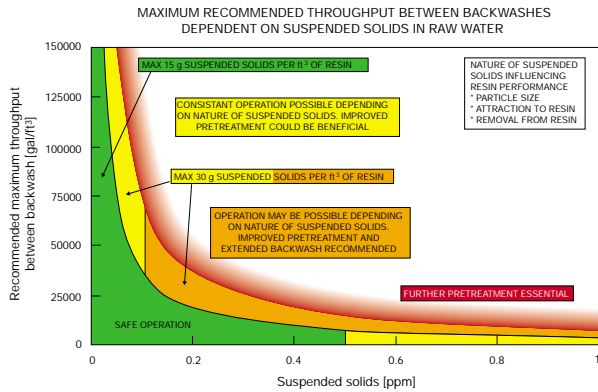
| Strong Acid Cation | Weak Acid Cation | Strong Base Anion | Weak Base Anion |
|--------------------|------------------|-------------------|-----------------|
| PUROPACK C100      | PUROPACK C104    | PUROPACK A400     | PUROPACK A100   |
| PUROPACK C150      |                  | PUROPACK A200     | PUROPACK A847   |
|                    |                  | PUROPACK A500     |                 |
|                    |                  | PUROPACK A510     |                 |
|                    |                  | PUROPACK A850     |                 |

## Better Water Quality

The pilot plant data proved that the **PUROPACK** system is able to deliver a higher water quality. Water quality of  $< 0.4 \mu\text{S}$  from a simple 2 stage packed bed system was routinely achieved.

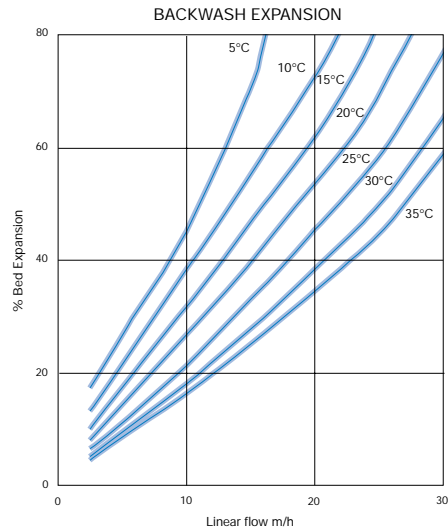
## Guidance Relating to Suspended Solids

The fully integrated design provides detailed information relating to the presence of suspended solids.

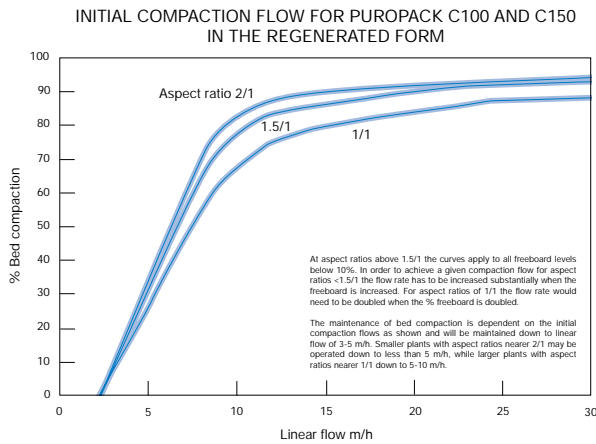


The suspended solids information provides a concise reference which allows **you the designer**, to easily identify any issues relating to the presence of suspended solids in the influent water. **The inclusion of a backwash column adds flexibility in the handling of various levels of suspended matter and reduces unplanned shut downs.**

## Full Selection of Backwash Graphs Provided



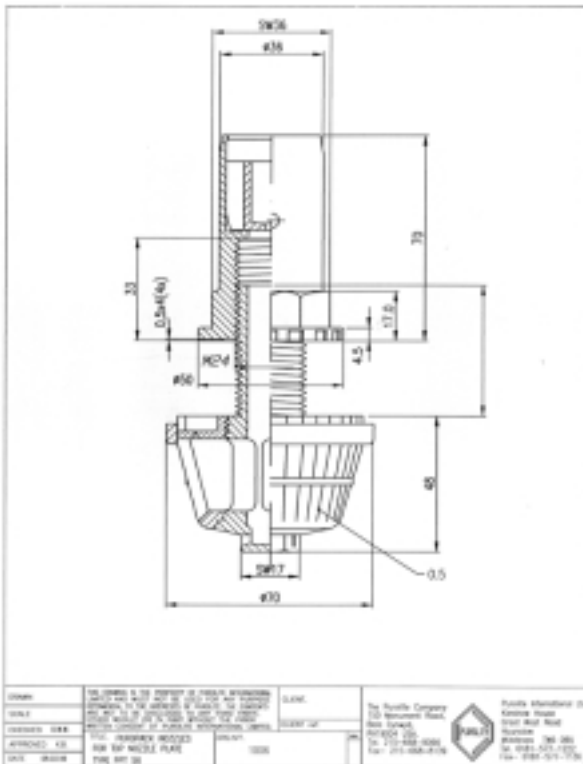
## Bed Compaction - Service Flow



## Improved Water Flow Characteristics

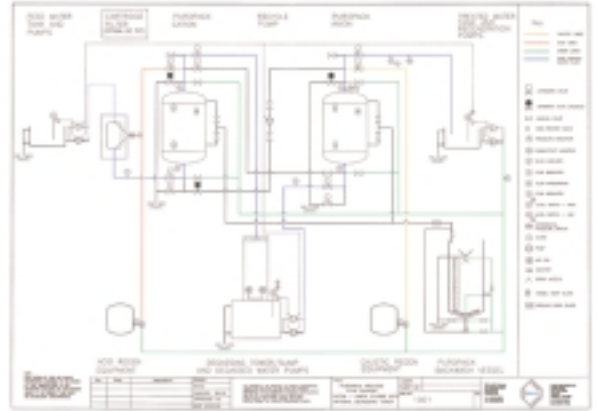
The proprietary nozzle designs allow for improved water and regenerant distribution through the **PUROPACK** resin bed.

**A key feature** in the nozzle design is their ability to handle both high service and low regenerant flow rates without loss of distribution efficiency.



## Typical Engineering Drawings

The engineering section provides information on vessel designs and distribution systems in both metric and US units.



## Manual Availability

This is available to engineering companies engaged in the design of high performance water treatment plant on a day to day basis.



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