



## Technical Data Sheet: Pall IMPRO™: Intelligent Maximum Performance Reverse Osmosis

IMPRO™ Reverse Osmosis (RO) systems are designed to maximize water recovery, consume less energy and minimize membrane fouling and scaling. These reliable units reduce waste streams by 50-80% while easily handling challenging feedwaters.

Featuring patented closed circuit desalination (CCD™) technology, Impro systems are ideal for extracting purified water from a wide range of applications using standard RO membrane elements and components. The smart configuration gives operators direct control of recovery rate, permeate flow and offers unmatched flexibility and ease of use.

### IMPRO Benefits

- **Higher Recovery** — Packaged filtration system recovers up to 95% of wastewater, significantly more than conventional RO
- **Minimum Waste Disposal** — Highest guaranteed recovery reduces disposal costs compared to traditional membrane technologies
- **Intelligent Operation** — Automatically adapts to variations in feed water composition, temperature and flow
- **Reduced Energy Consumption** — Operates near thermodynamic minimum

### Typical Applications

- Industrial boiler feed or cooling tower makeup
- Brine minimization
- Brackish water treatment
- Municipal wastewater reuse



### Standard Features

- Automatic response to feed variations
- Programmable logic controller with remote monitoring and control functionality
- Chemical dosing systems
- NSF-certified components

### Optional Features

- Membrane pretreatment
- Clean-in-Place (CIP) and flushing systems
- Mixed-bed permeate polishing
- Transfer pumps, storage tanks

### Operating Parameters

- Adjustable Recovery: 75-98%
- Rejection: 95.0-99.5%
- Adjustable Flux: 6-25 gfd (10-42 l/mh)
- Feed: TDS 0-10,000 mg/L
- Temperature: 36-113°F (2-45°C)
- Max Pressure: 450 psi (31 bar)
- Inlet Pressure: 10-60 psi (0.8-4.0 bar)

The IMPRO is available in a variety of standard skid-mounted configurations.

Model	Average Permeate Flow (gpm [m <sup>3</sup> /hr])	Maximum Permeate Flow (gpm [m <sup>3</sup> /hr])	Number of Elements
IMPRO 50	50 [11]	75 [17]	12
IMPRO 100	100 [23]	140 [32]	20
IMPRO 150	150 [34]	190 [43]	32
IMPRO 200	200 [45]	280 [64]	40
IMPRO 300	300 [68]	350 [79]	60
IMPRO 450	450 [102]	560 [127]	96
IMPRO 600	600 [136]	700 [159]	120
IMPRO 900	900 [204]	1,120 [255]	192



839 NYS Route 13  
Cortland, NY 13045  
Americas  
+1.607.758.1774 telephone  
866.475.0115 toll free in U.S.

[www.pall.com/water](http://www.pall.com/water)

Pall Corporation has offices and plants throughout the world. For Pall representatives in your area, please go to [www.pall.com/contact](http://www.pall.com/contact). Because of technological developments related to the products, systems, and/or services described herein, the data and procedures are subject to change without notice. Please consult your Pall representative or visit [www.pall.com](http://www.pall.com) to verify that this information remains valid.

Smart Water Solutions

© Copyright 2017, Pall Corporation. Pall, , and Aria are trademarks of Pall Corporation. ® indicates a trademark registered in the USA. ™ is a common law mark in the USA.

PWIMPROSKIDDS

February 2017