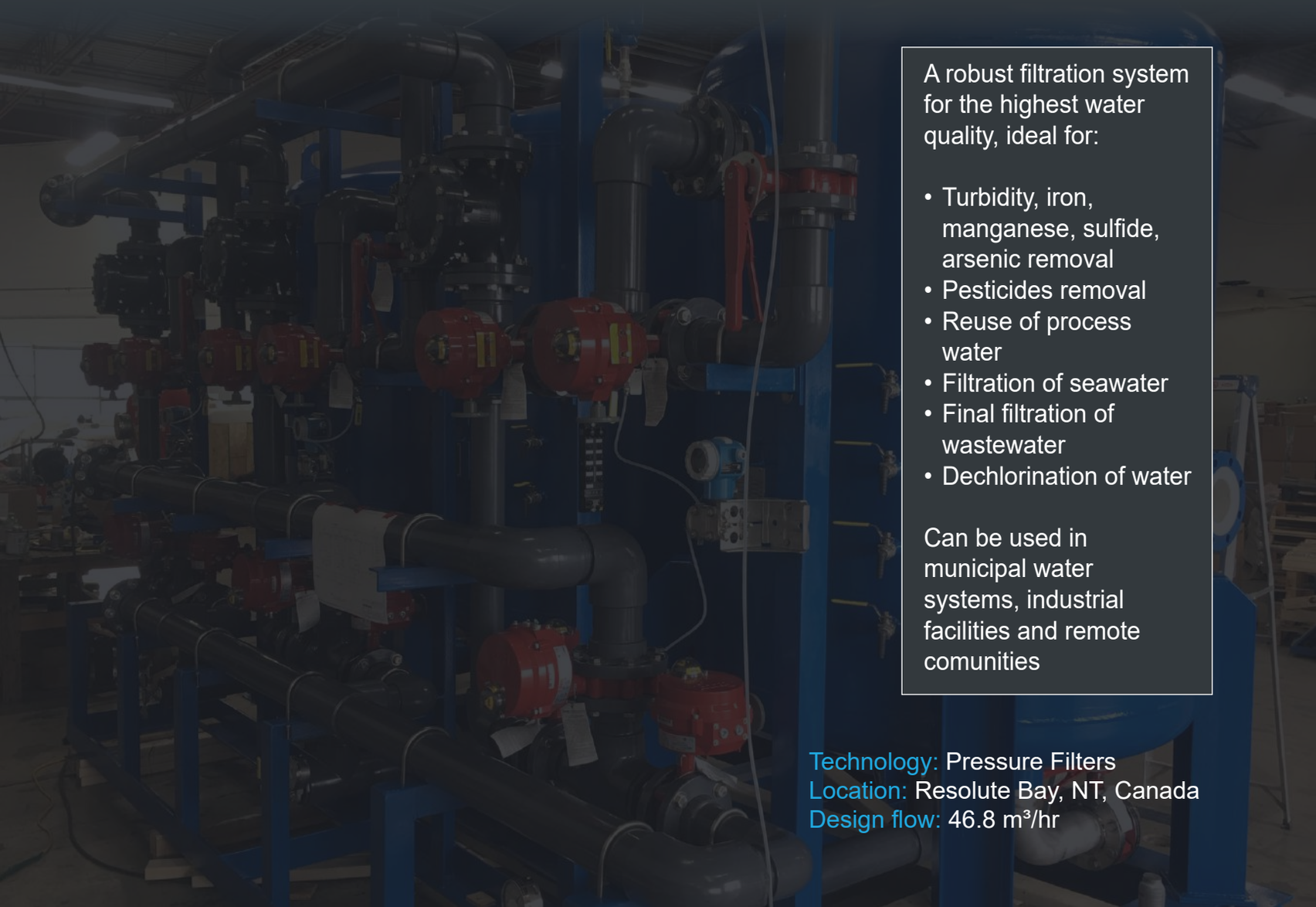
ENGINEERING WATER
INNOVATION SINCE 1950.

NAPIER-REID

PRESSURE FILTERS®



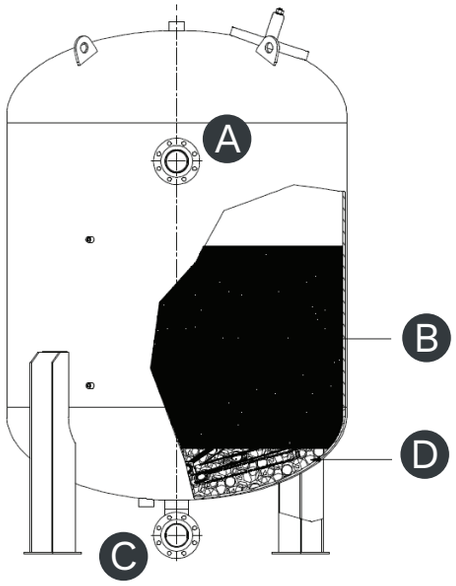
A robust filtration system for the highest water quality, ideal for:

- Turbidity, iron, manganese, sulfide, arsenic removal
- Pesticides removal
- Reuse of process water
- Filtration of seawater
- Final filtration of wastewater
- Dechlorination of water

Can be used in municipal water systems, industrial facilities and remote comunities

Technology: Pressure Filters
Location: Resolute Bay, NT, Canada
Design flow: 46.8 m^3/hr

PRESSURE FILTERS PROCESS



In NR–Pressure Filters, the incoming raw water is distributed over the filtration area of the filter through our unique well designed flow distribution system A

The water filters down through the different layers of the filter bed. The filtration media mechanically strains out dirt and impurities B. The filtered water is evenly collected over the filtration area by our unique water collection system that prevents channeling and short circuiting C. When the differential pressure across the filter increases beyond a preset value, the filter bed is backwashed to remove the entrapped impurities in the filter media bed and return the filter to its original filtration capacity. NR filters are equipped with underdrains D, an optional air scouring system and efficient backwash water distribution system for effective backwash.

PRESSURE FILTERS MAJOR COMPONENTS

PRESSURE VESSELS

NR pressure vessel are designed and fabricated in accordance with ASME code, and provided with lifting lugs and appropriate sized man ways. Interior lined with NSF approved epoxy suitable for potable water service. Available in FRP, coated carbon steel or stainless steel.

MEDIA

The pressure filters are supplied with suitable media: dual bed, multi media bed, sand, anthracite, greensand, or MD-80 catalytic media for iron, manganese, arsenic, and H_2S removal.

AIR SCOUR & UNDERDRAINS

Efficient under-drain collection / backwash distribution system for minimal pressure drop and proper backwashing.

PRESSURE FILTER ADVANTAGES

1. EFFICIENT AND FAST

NR-Pessure Filters have a high solids holding capacity, and ability to operate at high pressure loss, resulting in longer filter runs and reduced backwash water requirement as little as 2% of plant flow.

2. VERSATIL DESIGN

Different package design and multi-tank configuration available. System can be supplied in vertical and horizontal configuration, skid mounted, completely assembled, or loose for field assembly on concrete pads.

3. LOW O&M COSTS

Pressure filter system can be fully automatic with automatic control valves, PLC / SCADA control package, and control panel. This high degree of automation leads to reduced operator attention.

4. HIGH QUALITY WATER

Highly effective for removing suspended solids, sediment, algae, bacteria, microscopic worms, cryptosporidium and asbestos, colour, odour, precipitates of iron, manganese, and other impurities.

5. SMALL FOOTPRINT

Napier-Reid pressure filtration systems can have a very compact design, therefore have an smaller footprint compared to other systems.

6. COST-EFFECTIVE

NR-Pressure Filters are very cost-effective because they utilize much less energy than other filtration methods.

PRESSURE FILTERS INSTALLATIONS

LOCATION	ENGINEER	START	FLOW	QTY
Hardisty, AB	Worley Parsons	2021	11USGPM (2.5 m³/h)	2
Resolute Bay, NU	EXP services	2020	206 USGPM (46.8 m³/hr)	3
Raglan, QC	Hatch.	2020	1409 USGPM (320 m³/hr)	2
Pictou, NS	CBCL	2018	600 USGPM (136 m³/hr)	8
Greenbrook, Kitchener, ON	Associated Engineering / Stantec	2008	2378 USGPM (540 m³//hr)	3

Technology: Pressure Filter
Location: Rolling River, MB, Canada
Design flow: 120 USGPM (27 m³/hr)

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10 Alden Road
Markham, Ontario L3R 2S1

napier-reid.com
+1 905 475 1545